AEROSOL AGE

THE MAGAZINE OF PRESSURE PACKAGING

IN THIS ISSUE:

- What's New in Containers
- Developments in Valves
- Aerosol Paints
- Pressure Packed Soft Drinks
- New Plant for Stalfort

November 1956

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on your AEROSOL PRODUCT

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BRICKBATS and BOUQUETS from the MAILBAG

One of our foreign plants is interested in packaging perfumery, insecticides, etc., in aerosol containers. We would much appreciate it if you could give us the names and addresses of firms geared to handle this type of packaging.

P. Feldstein
INTEROCEAN EXPORT CORP.
New York

Referred to custom fillers in the area.

Would it be possible for all of our salesmen to receive a personal copy of *Aerosol Age?* I think it is a good magazine, easy to read, and seems to be filled with up-to-the-minute constructive happenings in the aerosol industry.

As there is so much to be learned by all of us in this relatively new field, the more we read about it, the better.

It takes considerable time for the office copy to circulate around, and then we all have a way of scanning through these publications much too quickly. If a copy could be sent to the individual salesman's home, he would have a better chance of reading it.

A. F. Lindsay, Jr.
VAN AMERINGEN-HAEBLER, INC.
New York, N. Y.

We are delighted to have an increasing number of orders for group subscriptions. They carry a reduced subscription fee.

The Publishers

We wonder if you could let us know if there is any published data on the construction of containers for the Aerosol trade. We are contemplating marketing aerosols and our first difficulty will be to lay down specifications for the can manufacturer.

We would also be interested in the address of firms making Aerosol valves.

Enclosed please find check for a year's subscription to *Aerosol Age.*

HENDERSON & CIA S.A.
Montevideo, Uruguay

This inquiry was referred to container and valve manufacturers.

We are manufacturers of a liquid white-wall tire cleaner and are interested in packing it in aerosol cans.

Can you give us any information as to the procedure or perhaps supply the name of some nearby custom filler of such products.

C. V. Jones
JONES AUTO SUPPLIES
Huntington, W. Va.

Referred to custom fillers in the area.

(More Letters On Page 43)

In the Spotlight this month

- **Aerosol Valves** . . . The growing complexity of the aerosol industry has multiplied problems for the valve manufacturer. To offer a complete line of valves to meet the needs of different products, containers, changing delivery rates and spray patterns, the valve manufacturer must offer hundreds of models if his line is to be complete. Aerosol valves up-to-date in an article by an expert in the field on pg. 10.

- **The Paint Market** . . . The aerosol paint market would be "an easy one to spoil," paint manufacturers are warned. Formulating an aerosol paint is completely different from formulating standard paint for brush application. See page 24.

- **New Container Materials** . . . New and improved containers for aerosols are being introduced to the market at a rapid rate. Recent developments include DuPont's nylon plastic container and Peerless Tube Company's extruded aluminum container. For details see page 12.

- **Merchandising Real Kool** . . . Pressure-packed beverages called a success at the conclusion of their first season on the market. Plans for marketing "Real Kool" soft drinks next season are detailed for Aerosol Age readers in an exclusive progress report on page 18.

- **New Aerosol Cans** . . . Two new types of aerosol cans and an HCL-inhibitor for aluminum aerosol containers are new developments in the European aerosol scene. His monthly observations on "Aerosols Overseas" are presented by our European observer on page 31.

- **About Concentrates** . . . Any aerosol operator having the responsibility for changing concentrates should be thoroughly trained in all details of the job. A discussion of personnel education as an important factor in quality control by your Aerosol Consultant on page 34.

THIS MONTH'S COVER

Campana, makers of Italian Balm, have introduced the first spray hand lotion to be packaged in aerosol form, "Italian Balm Lotion Spray."

G. Barr and Co., Chicago, will fill the new aerosol.

Campana recently completed nationwide distribution of the product in drug and department stores at $1.25.

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The magazine of pressure packaging

AEROSOL AGE

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so you

had your

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shave

this morning!

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Editorials

FOR the first time since the aerosol market started its upward climb ten years ago, there has been, over the past few months, a definite interruption in the steadily ascending sales curve. As in previous years there was the usual seasonal decline in July and August, but this year it has not been followed by resumption of normal activity in September and October.

A number of explanations have been advanced for the lull in sales. For one thing this has been a rather unsatisfactory season for insecticides generally. Hot dry weather in many areas, from midsummer on, reduced sales levels sharply just when packagers of insecticides were beginning to think they might have a very good season indeed. When insect populations are reduced, sales suffer automatically.

Another logical explanation for the current sales lassitude is that this is the first season for the industry in which no dramatic new sales-building product has been introduced. One year it was hair lacquer, another year, room deodorant or artificial snow—each time a major new product to help expand sales totals for the whole industry. This season there has been no such new general, industry-wide sales leader, though glass cleaner, a late season entry in the aerosol derby, is reported to be doing commendably for the major marketer. Many other new products are reported to be in various stages of preparation for the market, but none was quite ready to make a major contribution to building up the industry's sales totals for 1956.

While there is naturally some concern over the failure of '56 sales to go as high as expected, there is no feeling anywhere in the industry that the interruption in the steady upward course of aerosol sales is anything more than temporary. The belief is widespread that aerosols are about to move into big volume in the drug and pharmaceutical fields—and when they do, the sky may well be the limit.

THE aerosol method of packaging, it has been said, can find logical use in the application of any product that need be sprayed, sprinkled, daubed, dusted or spread. While by no means universal, the field of application for aerosols is admittedly tremendous.

A thought which might profitably be kept in mind in seeking to open up new markets is that one prime advantage of the aerosol method of application is that it does not necessarily require that the active ingredient to be dispensed be water-soluble. This suggests that there might very possibly be candidate materials for aerosol packaging in the files of many research departments, which had perhaps been investigated years back, been found to offer numerous advantages for specific applications, but then perforce abandoned because of failure to exhibit the water-solubility considered so essential before the aerosol principle of application was explored.

It might well pay any research organization to check back through its files for materials such as this—which once might have been thought to possess a disqualifying deficiency, but now through application of the aerosol dispensing principle could be turned into practical commercial products.

Comments on *AEROSOL VALVES*

THE growth and development of aerosol spray valves can be attributed principally to the requirements of existing products, requirements of products and pressure packaging principles being developed in the research laboratory, and available packaging equipment. It has been aptly demonstrated since 1946 that different products require varied type designs in aerosol valves. Depending on the products and the spray characteristics required of these products, changes have been necessary in construction materials and design of aerosol valves. Contemporary aerosol valves differ greatly from the valves used on the wartime high pressure aerosols, and the valves used in the early days of low pressure aerosols.

Initially, corrosion of various metals due to the pressure of water, necessitated the change to more corrosion-resistant materials. Later the advent of personal products such as hair lacquers, shave creams, deodorants and antiperspirants made necessary the use of plastic valve parts. Material changes have been required in elastomers because of the use of more potent solvents which cause excessive swelling of elastomers. Most valve manufacturers can today supply several types of elastomers depending on the product to be packed. More recently, products such as pressurized beverage concentrates and window cleaners have dictated the use of more resistant materials for valve mounting cups.

Foam products such as shave creams, shampoos and hand creams and products requiring specific spray patterns and particle sizes have made design changes necessary in valve dispensing heads. Foam dispensing spouts have been designed for functional operation and appearance. Spray patterns and particle size requirements have meant changes in orifice shape and size of dispensing buttons. Constant research leading to further improvement of aerosol products and principles has resulted in more precise requirements in valve performance.

No longer will users accept just any aerosol valve design for their products. The attitude that any valve will do the job has all but disappeared. A specific example is the stringent requirements for rate of delivery from an aerosol valve. Research in product effectiveness has indicated that different products require different delivery rates. As a matter of fact, rate of delivery has become such an important factor in most products that rival companies marketing identical products now often request different rates for their products depending on what their research departments feel is the most satisfactory. For example, the rates of delivery for space insecticides now vary from 0.80 grams per second to 1.20 grams per second at 70° Fahrenheit.

One may ask "how can the valve manufacturer cover this broad range of deliveries?" It has not been a simple task to be sure. Through long hours of research and development the valve manufacturer has been able to satisfy these requirements. There are three principal controlling orifices in the construction of most aerosol valves. These are the valve body orifice, the valve stem orifice and the valve button orifice. By combining different sizes for these three valve orifices, a broad range of deliveries can be covered. In addition, new manufacturing techniques have been

developed, and more scientific means of inspection adopted, so that the valve manufacturer can assure his customer of constant and uniform performance.

Let us consider some other valve developments which have come forth in the last several years. For a period of time progress with aerosol glass packages was slow due to various reasons, one of which was valves. Eventually an entirely new container was presented to the aerosol industry for packaging consideration, but this package needed suitable valves before it could be marketed. The valve manufacturer was confronted with a package which necessitated an entirely different design than what had previously been used. The valve had to be affixed to the container by a method not common to the aerosol industry. This meant much research for the valve manufacturer to develop a suitable type ferrule which would hold the valve onto the bottle. The ferrule had to be manufactured to the dimensional specifications of the bottle, and a suitable material had to be selected for this ferrule to assure a tight and permanent seal onto the bottle.

Aluminum was the initial choice of most valve manufacturers as the logical metal of which to make the ferrule because of its ease of being sealed onto a bottle. Later one manufacturer developed a steel ferrule because of leakage experience. This leakage was attributed to aluminum fatigue which caused the seal of the valve onto the bottle to become loose.

The glass bottle has been advanced as a suitable package for products which heretofore could not be packaged in steel containers due to their attack on steel; hence, the valve manufacturer had to use materials of construction which were inert to these products. Most bottle valve parts are made of plastic and stainless steel which to date have been found very serviceable with most products. Although the basic material being used for the sealing ferrule may be attacked by the product, this does not become a factor since the design of most aerosol bottle valves is such that there is no internal contact of product and ferrule.

The possibility of exterior attack of the ferrule by the product has been eliminated by the use of appropriate coatings and finishes. Examples are the use of anodized aluminum and clear solvent-resistant lacquer over brass-plated steel. With these valve developments, along with developments by the container manufacturer, the aerosol bottle is coming into its own as a suitable aerosol package. Along these same packaging lines of inert containers, plastic containers are coming onto the scene which will require the valve manufacturer once again to put his technological skill to work for the development of suitable valves for these containers.

At present there is an urgent need for metering valves by the pharmaceutical industry which has been developing and marketing some pressure-packed products. Valve manufacturers at present are working feverishly on this problem. One manufacturer is currently producing such a valve for a pharmaceutical item which is now on the drug store shelf. Past performances would indicate that in the very near future many other valve manufacturers will be presenting their models of metering valves.

Another item requiring the valve manufacturer's prompt attention is the dry powder aerosol. Many problems have confronted the valve manufacturer in attempting to supply a valve for such a product. The most common failures of valves when used to spray dry powders are clogging and leakage. Clogging occurs when powder particles build up in certain valve restrictions, eventually causing blockage of valve passages. Leakage occurs when powder particles build up on valve seats, causing improper shut off.

The solution to these problems is currently being sought by the engineering departments of the valve manufacturers. Many believe the answer may be the development of an improved dry powder aerosol formulation. This school of thought contends that if the right suspending agent could be found so that the dry powder could be suspended as a colloid in the propellant, then many of the present valve designs could be used successfully. This may illustrate the close working cooperation necessary between the valve manufacturer and the formulator for the successful solution of mutual problems.

A new era of aerosols is beginning, in which the valve manufacturer will play an important part. The current trend seems to be toward three-phase aerosols and low propellant content aerosols. Where once the breakup of product to fine particles was achieved mainly by the propellant, now the valve has been called upon to help achieve the desired breakup. This is especially true in three-phase aerosols

(*Turn To Page* 45)

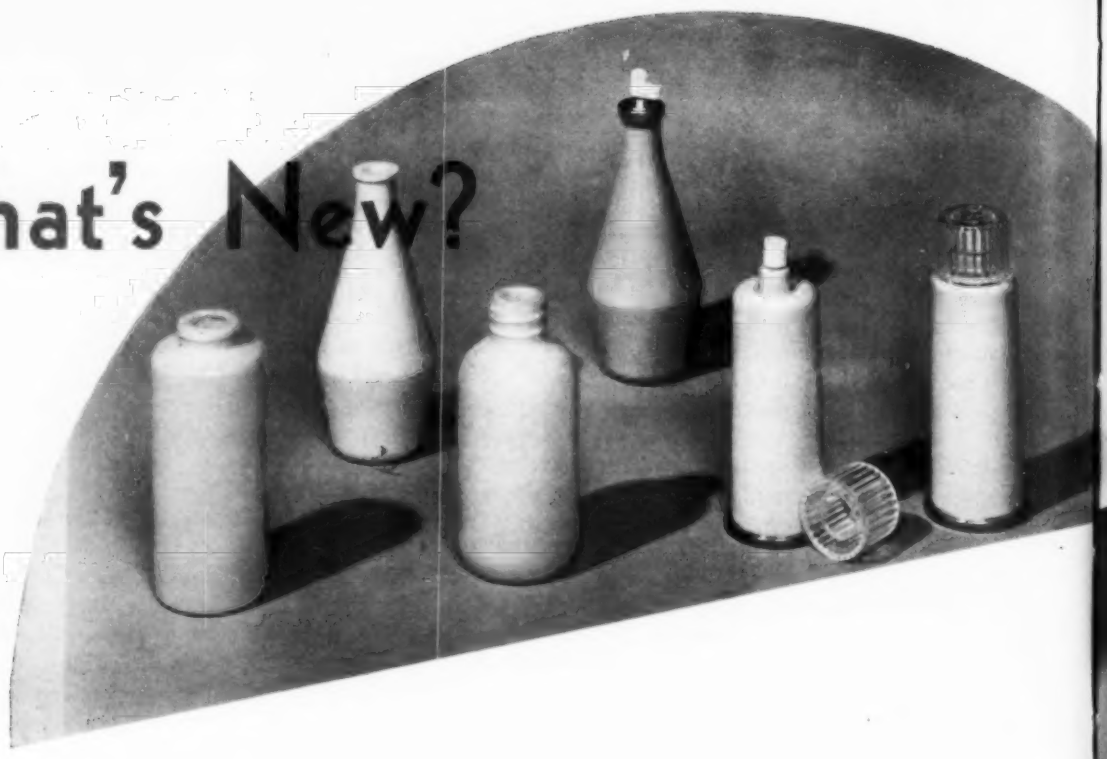
By Joseph C. Pizzurro

Precision Valve Corporation

Yonkers, N. Y.

Reviewing recent developments in valve design to combat corrosion problems and clogging, to assure desired rate of delivery, etc., and summarizing the current status of metering valves, valves for three-phase aerosols, food aerosols, etc.

What's New?



AEROSOL containers have come a long way since the crude heavy steel cylinders in which the first "bug bombs" were packed. The introduction of the handier, lightweight beer-can type container has been followed by a whole series of improvements and refinements which have included the development of dome-top cans, seamless can construction, all-over lithography, and very recently, pigmented side striping with which it is now possible to carry out without interruption the full effect of the background color.

During this period, while the can companies have been making so many basic improvements in the design of aerosol packages for general line products, other producers of speciality aerosol containers have been busy too. We have had jumbo containers introduced, making it possible to package certain types of products in units large enough to be really effective in use; and for products in the luxury line, we now have a line of light weight aluminum containers, strong, leak-proof and taking multicolor decoration without problem. Plastic coated glass containers have been developed (see the October issue of *Aerosol Age*, pages 16-18) which have made it possible to extend the advantages of packaging in glass to a wide variety of cosmetic products.

Aerosol Age reports this month on two more interesting and very recent developments in aerosol containers for products in the luxury line—a new nylon plastic container developed by the Polychemicals Division of Du Pont and an extruded aluminum container produced by Peerless Tube Co., Bloomfield, N. J.

du Pont's New Nylon Container

STRESSING safety and eye appeal in its bid for part of the aerosol container market, E. I. du Pont de Nemours & Co., has developed new containers based on "Zytel" nylon resin. Though no consumer aerosol products have been packed as yet in nylon, several firms are working on containers made from "Zytel," and they may soon be on the market. Du Pont feels that these new nylon containers have successfully passed the experimental and testing stages, and are now ready for the market.

The "Zytel" resins (of which there are several) belong to the polyamide family, and have been used for several years in many different fields of application, utilizing injection molding, extrusion and wire coating. The adaptability of this product, its chemical resistance, form stability at high temperatures, lightness in weight, and particularly its "eye appeal," are some of the features supporting du Pont's belief that this material offers real possibilities for the aerosol industry.

"Look, it's safe!", said W. M. Ryan of the du Pont Polychemicals Division, as he picked up a sample container and threw it with full force against the wall. The container didn't break, demonstrating that it has a definite advantage in meeting the requirements of a rigid safety code.

"Zytel" can be converted into any desirable form, in a variety of colors, and is, therefore, of particular "eye appeal" to women buyers. For this reason it should find acceptance by packers of cosmetic and pharmaceutical aerosols.

—in Containers

AEROSOL AGE presents a staff report on new developments in containers for cosmetic and pharmaceutical aerosols. Opposite page: first four containers are examples of flexibility in style of "Zytel bottles" made in Du Pont workshop. Two containers at extreme right of same photo show Precision Valve's version of the nylon container. (This page) Extruded aluminum aerosol containers by Peerless Tube Company.

"Zytel" is supplied by the du Pont Polychemicals Department in the form of molding powder (small, cube-shaped granules). Du Pont will not make the containers itself . . . instead it will supply the powdered resin for use by any processor to form containers by blow molding or injection molding. Du Pont also offers its technical service department to assist with production questions by users of the material. Precision Valve Corp., Yonkers, New York; National Plastic Products, Odenton, Md., and Plax Corp., Hartford, Conn., are among six of the companies reported to be investigating this material for aerosol containers.

No particular difficulty is encountered in handling the material itself. The resin can be processed in blow molding equipment already in use for the production of "squeeze bottles." It can be molded in conventional injection machines of all designs without alteration. However, the quality and dimensional accuracy of the molded piece are governed to some extent by the characteristics of the particular molding equipment used, which in turn affects the control that can be exercised over molding variables. In extrusion molding, "Zytel" requires processing temperatures as high as 550° F., so electrical heat is preferred in all processing equipment.

Injection molded containers (being made by Precision Valve Corp. on an experimental basis), are seamless tubes and offer the further advantage that the valve is an integral part of the container. These tubes are sealed at the base of the container by "crimping" (process used at Precision Valve) or by "spin sealing," (process used at National Plastic). blow molded containers have no seams at any point, offer freedom of design, and as du Pont developers put it, "the glamour of glass with the additional features of safety and toughness."

Du Pont points out that one property of "Zytel" to be checked for each product being considered for packaging in a nylon aerosol container, is its permeability. This property is typical of resins, and common to any container made from any of the resins (for example the "squeeze bottle"). Permeability is a function of the partial pressure differential across the container, and is of such a magnitude for most formulations as to be almost negligible. Comparing normal loss of a propellant around a valve and through the container, du Pont quotes data showing the loss through the valve is as much as 5 times greater. In any case, it is emphasized that adequate tests should be made of formulations considered for packaging in "Zytel" containers, but that permeability is normally such a minor factor that it should not preclude use of the material in aerosol packaging.

What about cost? . . . Du Pont estimates that "Zytel" will cost four times as much as "Alathon," which is the polyethylene most commonly

known to the consumer. There are no figures showing a direct comparison with glass, and coated glass containers . . . but undoubtedly the new nylon containers will be more expensive. Most redeeming factor of the new material is its toughness, and its safety. In an industry like the aerosol field, which is so vitally concerned with the consumer, and safety for the consumer, Du Pont feels that "Zytel" may very well find a substantial place for itself in the aerosol container market.

Peerless Introducing New Aluminum Container

A NEW type aluminum aerosol container is about to be launched on the market. Peerless Tube Company, Bloomfield, New Jersey, recently completed development of an extruded aluminum aerosol container which they assert is a vast improvement over any container thus far developed. Peerless appears to have successfully solved two major problems in the manufacture of aluminum aerosol containers: seaming difficulties and achieving sound, leakproof containers in the small size range.

The new container is a one-piece can, with no bottom seam. It has a relatively small aperture at the top to which the valve is sealed. Leakage thereby becomes virtually nonexistent.

The project has been directed by Theodore W. Schmitt, Peerless executive vice president, and designed and supervised by W. W. Pflug, vice president of the firm's Shell Division. According to Mr. Schmitt, the potentialities of the product are vast, and it could very well open up new fields for the aerosol industry. With the pressure problem effectively controlled in very small pressurized packages, he predicts a new interest in the field of aerosol perfumes, colognes, deodorants, and pharmaceuticals in purse and pocket sizes. "In an attractive and safe metal container, there will be no hesitancy on the part of the consumer to carry the container everywhere," said Mr. Schmitt.

Because the cost of aluminum is considerably higher than steel, Peerless Tube Company realizes that the future of this new container lies in the cosmetic and pharmaceutical field rather than in competition with pressure containers for insecticides and other non-luxury items. It has a high-fashion appeal because of its very small size and its attractive appearance. It is admirably suited for perfumes, colognes, deodorants and other cosmetic and pharmaceutical items.

"Another good possibility lies in the drug field," Mr. Schmitt declared. "The extruded container would offer a number of advantages. Using the right valve, the person using the product could be sure of getting the exact dosage. Throat and nose sprays and other drug products, even of the prescription type, could be dispensed in this safe, leakproof, attractive container."

Questioned about the advantages of the new Peerless container over the types currently being employed for cosmetics and pharmaceuticals, Mr. Schmitt listed the following advantages for aluminum:

1. Light weight — considerably lighter than glass, other metals, and the thicker plastics necessary to withstand pressures.
2. Unbreakable — the Peerless container would be safe from quick pressure releases caused by dropping or crushing the container accidentally.
3. Ability to resist higher internal pressures.
4. Length can be varied without expensive new molds. In the Peerless process, such adjustments can be made quickly on the trimming machine.
5. Relatively thin walls (as compared with plastic and glass), giving a greater volume for the size of the container.
6. Greater flexibility of decoration.

On this last point, Mr. Schmitt pointed out that the aluminum container will allow up to four colors on the base coat, making for a highly attractive container for cosmetic and pharmaceutical products. The containers may also be buffed and either coated or anodized.

Peerless Tube Company has succeeded in making this sturdy type container even in sizes down to an inch long, with attractive metal and plastic caps. Large scale production is planned for mid-December.

Peerless Tube has more than a half-century of experience in the field of container manufacturing. Less than two years ago, Peerless entered the aerosol field with the announcement of its 2¼ ounce aluminum aerosol all-purpose container. "Acceptance of this item has been most gratifying," said Mr. Schmitt.

The firm has turned out billions of plain and decorated collapsible tubes for myriad products, plus cans and shells of many types. Its plant in Bloomfield has the most modern production lines set up, turning out containers of aluminum, lead and tin. Though relatively new to the aerosol field, the new Peerless aluminum container answers an increasing demand from aerosol marketers for small-size, high-fashion packages.★

Marketers of aerosol products currently have a much wider range of containers from which to choose. New developments are coming fast; they include extruded aluminum containers and nylon plastics. Major container manufacturers reported working on new styles, sizes and shapes for the expanding aerosol market.

A NEW PLANT

for Stalfort & Sons

New addition to Stalfort's pressure packaging facilities located near Washington will provide a total area of over 70,000 square feet.

JOHN C. STALFORT & SONS, INC., Baltimore, Md., are expanding the facilities of their Pressure-Pak division. When completed, the new expansion program will provide a total area of over 70,000 square feet. To give some idea of the size of this addition, the new area contains enough room to house 88 freight carloads of aerosol containers.

Stalfort Pressure-Pak is one of the largest custom loaders in the country, and management says that this expansion program will further increase the efficiency and output of the plant. Currently, they are operating three high-speed lines with a capacity of over 300 cans per minute. The additional facilities being provided will enable the present lines to operate almost continuously, with only minor delays for necessary maintenance and quality control checks.

The design of the building is such that one or two filling lines may easily be added without interrupting the constant, continuous flow of concentrate, propellant, and cans to one end of the lines, or the steady flow of filled containers in shipping cartons from the other end.

Over 2,000 square feet is being devoted to what Stalfort believes will be one of the most modern up-to-date research and development laboratories in the industry. Increased emphasis is being put upon laboratory research and control because of the exacting tolerances that must be maintained to keep a uniform fill on such high speed machines. This increased laboratory space is important not only to maintain quality control, but for use in developing new products, because many of Stalfort's customers bring them only the idea for a new product. Stalfort then develops and tests formulas, designs labels and containers, loads the containers, and drop ships the finished product to the customer's dealers.

Plans are being made for groups to pre-view the new Stalfort plant in connection with the 1956 Chemical Specialties Manufacturer's Association Convention at the Mayflower Hotel in Washington, D. C., on December 3rd, 4th, and 5th. Visitors from the Convention will be taken on guided tours through the new Stalfort plant located just outside Washington. Technicians at the plant will be on hand to show and explain the filling lines, multi-stage chillers and dryers, refrigerated mixing tank, and the other technical phases of a modern custom loading plant.

Charles Beach, Stalfort's general manager, and Richard Krause, sales manager, will be in Washington at the convention, and will see that everybody who wishes to see the Pressure-Pak plant in operation is supplied with transportation from the Convention to the plant and back. Mr. Beach feels that all aerosol minded people will benefit tremendously by this plant tour, because their questions can be answered visually right on the scene of operations by experts.

Much study has been given by Stalfort to surveys of the future economic potential of the aerosol industry. How soon will it hit the billion dollar market figure? Sooner than you think, they say. They have some factors on this to discuss at the Mayflower Hotel and on the plant tours. How right their reasoning has been in forecasting the trend and general direction of the aerosol market in recent past years, and in correctly anticipating the expanding size of each year's market, is evidenced by the size of their own expansion plant programs in the past—and for the future.★

C.S.M.A. 1956 Aerosol Awards Competition

Winners of awards in the 1956 competition will be selected by the board of judges in mid-November. Award winners will be announced at the 43rd annual convention of the Chemical Specialties Manufacturers Association, at the Mayflower Hotel, Washington, D. C., December 4th.

The Judges

DONALD DESKEY
Donald Deskey Associates

ANTOINETTE DONNELLY
New York Daily News

JULIEN ELFENBEIN
Housewares Magazine

EDWARD MOLYNEUX
Cunningham & Walsh

JOHN A. WARREN
American Management Association

The Aerosol Awards Competition is conducted annually under the supervision of

The Aerosol Awards Committee of

Chemical Specialties Mfrs. Assn.

50 East 41st Street **New York 17, N. Y.**

New Products and Packages

"Ozium" is a room deodorant in a distinctly different package. A product of Woodlets, Inc., Buffalo, it is dispensed through a metering valve which gives five hundred measured sprays. Woodlets also supply the same unit in a special bracket as a permanent installation in GE air conditioners. Active ingredients are triethylene glycol, propylene glycol, isopropanol and essential oils.

Hamm-r-Spray, a custom crafted metallic hammered type finish offered in five colors (gold, silver, copper, green, blue), is the most recent aerosol metallic paint offered by Illinois Bronze Co., Chicago. Packaged in a 16-ounce can supplied by Continental. The valve is by Newman Green. Illinois Bronze fill the product themselves.

An aerosol for relief of nasal congestion—**Cold Relief**—by Sprayway, Chicago, is being packaged by Tru-Pine Co. in a Crown Can, using an Aerosol Research valve. Active ingredients include: menthol, ephedrine alkaloid, chlorobutanol, triethylene glycol, and oil of eucalyptus.

What is claimed to be the first aerosol shampoo on the market, **"Stand-By Creme Shampoo,"** a product of Stand-By Products, Inc., St. Louis. Shampoo has been recognized as a product difficult to package in an aerosol container because of the corrosion problem. On the basis of their shelf tests, Stand-By believe they have solved the problem.

ZIUM
AIR
CONDITIONER

ILLBRONZE
BRAND
H-5-5
Blue
A Custom Crafted Metallic
Hammered Type
Finish

Sprayway
COLD RELIEF
Medicates
with Normal Breathing
RELIEVES NASAL STUFFINESS,
SINUS INFECTION AND
HAY FEVER
ACTIVE INGREDIENTS

New!
CREME

REAL KOOL

IN an exclusive progress report to *Aerosol Age*, Marc Smith of Marc Smith and Associates, Baltimore advertising agency, told of future plans for merchandising "Real Kool" pressure packed beverages, a new product successfully introduced this season by C. C. Lang & Son, Inc., of Baltimore.

The new line of pushbutton drinks, first of its kind on the market, obtained distribution between April and August of this year in 44 major central and southeastern cities. "Real Kool" — 7 "gently carbonated" syrup concentrates, orange, grape, lemon-lime, black cherry, strawberry, root beer, and cola — was sold primarily through chain and large independent super markets. Distribution ranged from 20% to 90% in each market. Most, above 50%.

Introductory promotion varied from none at all to full saturation campaigns in all major consumer advertising media. The purpose, of course, was to enable sales and advertising executives to study the effects of a number of differing promotional approaches.

Television, both wholly sponsored kids' shows and spot campaigns, was the dominant medium employed. Outdoor, radio and newspaper were also utilized effectively.

-- merchandising plans for a new line of -- pushbutton beverages in pressure pack containers

Merchandising techniques varied, too. In some markets entire trailer-trucks were unloaded right at the store and the bright blue and white 12-can cases set up in mammoth displays on the floor. Many stores erected end-of-aisle displays. Some simply placed "Real Kool" on shelves with bottled beverages, canned juices, beverage mixes, or near the ice cream and dairy product freezers.

Other than large mass displays, shelf locations in the bottled beverage departments were found to be most effective. A minimum amount of point-of-purchase material was employed. Management felt that the unusual characteristics of the can itself constituted a strong self-merchandising factor. It was learned, however, that a more extensive use of point of purchase material would have been advantageous. The multiple uses and consumer benefits of this new *type* product required a consistent educational effort. Old consumer habits constituted considerable resistance in some markets. One favorable *quality* reaction, not especially anticipated, was the enthusiastic use of "Real Kool" with milk and other dairy products.

C. C. Lang and Son, Inc., Baltimore, packers of the new line, are currently researching key markets in an attempt to learn why, for example, two similar markets enjoying parallel promotional support, should react in opposite directions. Initial marketing also suggests further package development. Lang's laboratories expect to report findings and recommendations regarding every aspect of the package itself, including production techniques, before January.

Thus, after the first season, Lang reports success. Careful study of first season results, followed by revised marketing plans and an even more improved package, will be the groundwork for expanding markets in 1957. A full report on "Real Kool" pressure-packed beverages will appear in a later issue of *Aerosol Age*.★

AEROSOLS ARE BIG BUSINESS

1956 To Be Record Year For Pressurized Insecticides

NO RESEARCH staff in the industry is better equipped to help you secure your share of the growing aerosol market than Fairfield Chemical's trained technicians.

They helped to perfect the *first* aerosol package ever devised — the early High-Pressure bomb developed for the U. S. armed forces.

Today their research facilities and *specialized* knowledge in this field are second to none.

Safe, highly effective Pyrenone* concentrates are available for a wide range of non-toxic aerosols . . . roach and ant sprays . . . insect repellents . . . pet sprays and pet shampoos . . . plant sprays . . . and special types of pressurized insecticide sprays, either toxic or non-toxic.

Active ingredients of the Pyrenone concentrates are technical *piperonyl butoxide* and *pyrethrins.*

Why not bring down the high cost of distribution by adding one or more aerosol insecticides to your line?

For complete technical data, contact the nearest office of Fairfield Chemical Division, Food Machinery and Chemical Corporation.

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Branches in Principal Cities

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In Canada: Natural Products Corporation, Toronto and Montreal

CSMA Meeting December 3-5 to Highlight Key Aerosol Packaging, Marketing Topics

TALKS on a series of important aerosol topics will be prominently featured on the program for the 43rd annual meeting of the Chemical Specialties Manufacturers Association, to be held at the Mayflower Hotel, Washington, D. C., December 3-5. The major Aerosol Division sessions will be held Tuesday afternoon, December 4, while another joint session of the Aerosol and Automotive Divisions will be held the afternoon of December 5.

Talks are scheduled on Aerosol Particle Size, Analysis of Aerosol Constituents, Water Based Aerosols, Fragrance in Aerosols and Pressurized Packages for Automotive Use. In addition the Aerosol Scientific Committee will offer a report on various projects now in progress, and latest figures will be presented from the DuPont Survey on Aerosols.

Awards in the annual CSMA Aerosol Awards Competition will be presented to winners at the Tuesday afternoon session. Judging will take place about mid-November. The panel of judges for this year's competition includes the following: John A. Warren, American Management Association; Antoinette Donnelly, beauty editor of the New York *Daily News;* Julian Elfenbein, editor of *Housewares;* Donald Deskey of Donald Deskey Associates, and Edward Molyneaux of Cunningham & Walsh.

In addition to addresses scheduled for the two sessions of the Aerosol Division, there will be a number of talks of interest to aerosol fillers and marketers at sessions of other CSMA divisions. The Insecticide Division, at its session Tuesday afternoon, December 4, will feature a Symposium on Labeling, Regulatory and Toxicological Problems with Insecticides.

On the social side, the annual banquet, preceded by a cocktail party for the whole convention group, will be held Wednesday evening, December 5.

H. C. McIntosh, Standard Oil Co. of Indiana, has organized the program as chairman of the Aerosol Division Program Committee. Looking past the coming meeting, the Aerosol Division is already working on a special program for the 1957 spring meeting, to be held at the Hotel Drake, Chicago, May 20-22, 1957. This will mark the tenth anniversary of the first commercial introduction of low pressure aerosols. To mark the date a special program of papers on aerosol topics is planned.

Election of officers of the CSMA for the coming year will be held at the opening luncheon meeting, December 3. The Nominating Committee, headed by W. D. Moburg, Rex Research Corp., has prepared its list of nominees for new officers for the coming year which under the bylaws of the association must be bulletined to the membership at least a month before the date for the annual meeting. Currently Harry Peterson of Peterson Filling & Packaging Co., serves as first vice-president of the association.★

PROGRAM

AEROSOL DIVISION

Tuesday Afternoon, December 4

Address of Chairman of Aerosol Division, Charles E. Beach, John C. Stalfort & Sons, Baltimore.

Report of Scientific Committee Projects, W. E. Baulieu, Chairman, Bridgeport Brass Co., Bridgeport, Conn.

"Aerosol Particle Size," Dr. John C. McCool, B. F. Goodrich Chemical Co., Cleveland.

"Analysis of Aerosol Constituents," Morris Root, G. Barr & Co., Chicago.

"Water Based Aerosols," Lee D. Callans, General Chemical Division, Allied Chemical & Dye Corp., New York.

"Fragrance in Aerosols," A. Dingfelder, Felton Chemical Co., Brooklyn.

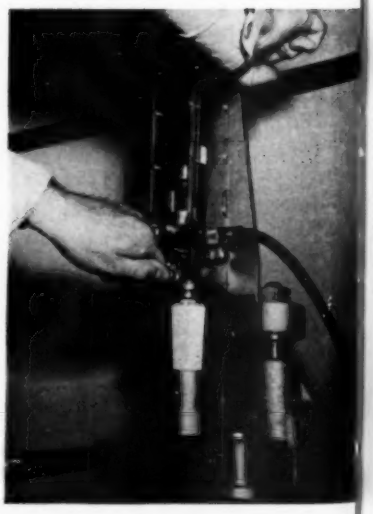
"DuPont Survey on Aerosols," T. D. Johnson, Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington, Del.

AEROSOL and AUTOMOTIVE DIVISION

Wednesday Afternoon, December 5

"Pressurized Packages for Automotive Use," J. M. Kimmel, DeMert & Dougherty, Inc., Chicago.

"It's easy



Typical of van Ameringen-Haebler laboratory leadership is this Liquified Gas Manipulator, first installation of its kind, with which the contents of any type container can be removed, replaced or transferred with complete flexibility under constant pressure.

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...if you know how"

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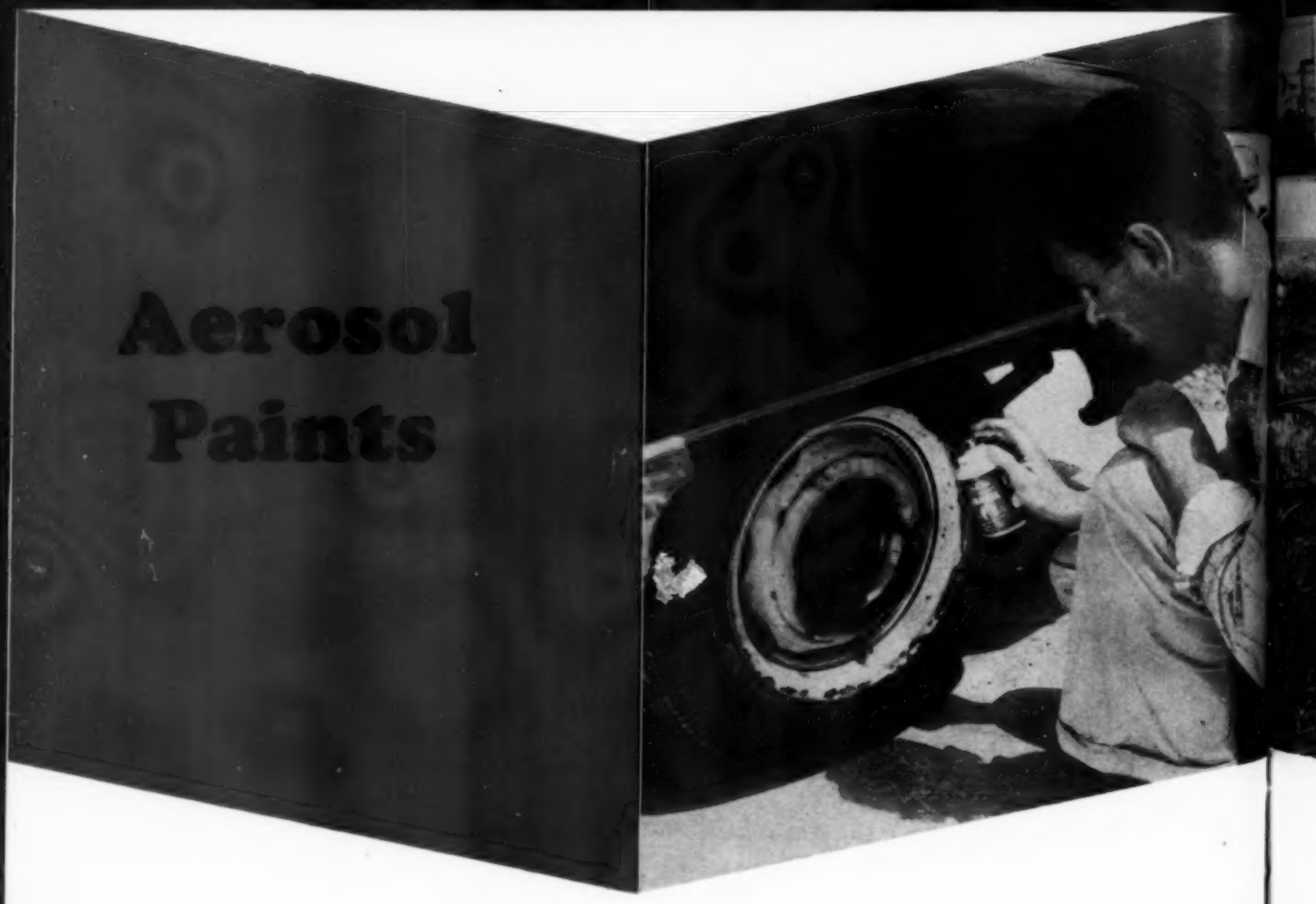
If you are planning to market a **pressure-packaged product**—remember that van Ameringen-Haebler, Inc. has overcome seemingly insurmountable problems for many manufacturers. The **unparalleled excellence of the** VAH Aerosol Research Laboratory provided with every facility for complete evaluation, formulation, progressive examination, test packaging and trouble shooting, plus the authoritative experience gained in the development of hundreds of successful aerosol products, is available to assist.

Although primarily concerned with matters of **fragrance, VAH** established its unmatched laboratory facilities to assist its customers in every phase of this new field of packaging, from product formulation to pilot runs for market testing.

5 STREET, NEW YORK 19, NEW YORK

Aerosol Paints



A SERIES of articles on Aerosol Paints by the magazine *Paint, Oil & Chemical Review*, Chicago, was initiated with an article in their September 20th issue under the title "Formulating for Aerosol Paints." Second in the series, to appear in a later issue, will be "The Place of Contract Packers in Aerosol Paints."

The subject is introduced with the observation that aerosol paints show promise of being "the hottest thing" to hit the paint trade since emulsion paints made such a big sales impact on the market about ten year ago. "The potential for aerosol paints is huge," the author believes, following the trend toward making application of such materials as paints, insecticides, cosmetics and chemical specialties extremely easy, which is aerosol's forte.

Spray painting with aerosol paints is the easiest way to paint, the article notes, since paints in a pressure package eliminate brush, rags and thinner, as well as the necessity for lengthy stirring or post-painting clean-up. At the same time paint manufacturers are warned that "the aerosol paint market would be an easy one to spoil."

"When a man pays $1.70 for a can containing at most eight ounces of working paint, he is paying a high premium. In a sense, he is buying convenience and a coating comparable to those he can lay on with a brush. When the gadget won't work, he feels cheated—and he has been. In many respects the performance of aerosol paints had been tending to build up a resentment against themselves which no amount of future cajoling and development can overcome."

Prospective marketers of aerosol paints are counseled that formulating this type product is a completely different proposition from formulating standard paint for brush application. "You can't just dump a standard formulation into a spray can and expect it to work. Clogging, suspension and particle size, viscosity, and compatibility must be considered, plus all the regular problems. Too large pigment size or agglomeration of pigment particles will jam up the needle valve holes. Pigment that settles at the bottom will be forced up into the tube to clog the nozzle. Viscosity too high leads to poor spray characteristics — viscosity too low causes running as it hits, speckling, or even drying in the air."

A series of basic formulations are suggested for: white enamel; acrylic spray; anti-tarnish lacquer; metal lacquer; spray paint remover; spray lacquer; aluminum coating; and green lacquer, to illustrate adaptations that are necessary in standard formulations to fit them for aerosol applications. Robert Randall of Kerr Chemicals Inc., Park Ridge, Illinois, is quoted as authority for the statement "There's no particular color that can't be put in aerosol cans. But you've got to handle them differently

The potential for aerosol paints is huge, but one can't simply dump a standard paint formulation into an aerosol container and expect it to work. Compatibility and viscosity are called key factors in successful aerosol paints.

Photos—Cleveland Aerosol Packaging Corp.

when it comes to the propellant. Most whites can be packed 60-40. Most lacquers and the other colors take a 55-45 fill. Suprisingly enough, much lacquer right off the shelf can go into aerosol cans and work without modification."

Several general suggestions are offered to guide the prospective areosol paint formulator. "Bend every effort to get as much paint into the aerosol can as possible. The propellant costs more than the paint."

Compatibilty Is Critical

"Watch compatibility closely" is another well advised word of caution. Changing ingredients without adequate checking can lead to trouble. Glenn Piper, district manager for The Kinetic Chemicals Division of E. I. du Pont in Chicago, is quoted as saying. "Every time you make even the slightest change in the formulation, you've got to go right back to the lab for complete testing. Don't assume that because you can switch components in a brush or spray paint you can make the same changes in an aerosol paint."

The limiting factors in the compatibility of the propellant and the paint base, it is pointed out, are the solvent power of the propellant and the nature and concentration of the film-forming resin. A 20% solution of ¼ or ½ second RS nitrocellulose in acetone will tolerate only about 1.5 to two parts of propellant 12, but will allow up to 3.5 parts of propellant 11 in the formulation. Using a mixture of 75% propellant 12 to 25% propellant 11—or even 60-40 ratio—it is possible to employ an equal weight formulation of propellant and nitrocellulose solution. A superior formulation would result, however, it is suggested, by employing a ratio of 40% propellant to 60% nitrocellulose. Use of a propellant mixture also improves the resulting product by making it less prone to precipitation. Using propellant 12 alone in 40% concentration results in a slightly cloudy product, but addition of propellant 11 helps solubility considerably.

"Solubility of the resin must be considered also. If ester gum is used as the resin, there should be no serious solubility problem—the tolerance for this resin is relatively high. If a non-oxidizing alkyd resin is used, the compatibility is not as good. Cellulose acetate is even easier to formulate, as the compatibility is even greater than the nitrocellulose.

"In a general way, there are several important parts to a nitrocellulose lacquer formulation. The vehicle contains ¼ or ½ second RS nitrocellulose, a resin (non-oxidizing alkyds, synthetics, or naturals will all work), and a plasticizer such as dibutyl phthalate. In the solvents and thinners part are the true solvents (ketones, esters, etc.), latent solvents such as alcohols, and diluents—the aromatic hydrocarbons are the most common here.

"A typical vehicle consists of 43 percent nitrocellulose, 43% resin and

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AEROSOL PRODUCTS—LETHANE 384 is compatible with all ingredients approved for use in household insecticide aerosols. A concentration of only 2% helps to give high knock-down—at unusually low cost.

CATTLE AND DAIRY LIQUID SPRAYS—When LETHANE 384 is used alone, or with a suitable chlorinated insecticide, it gives fast-acting, high-kill products for use on livestock, and in dairy barns and milk rooms.

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14% plasticizer. It's a tricky business. Toluene, for example, can improve the formulation up to a certain, and small, point: after this it detracts."

Viscosity an Important Factor

Viscosity is almost as important a factor as compatibility in its effect on performance of the finished aerosol paint, the article next observes, and "the type and concentration of the resin used as the basic film-forming material is probably the most important factor in determining viscosity."

Viscosity of the product must, of course, be balanced carefully against the type and quantity of propellant chosen for the formulation. As viscosity increases, a higher pressure is required to give a satisfactory working aerosol paint.

"Solvents also enter the viscosity picture. The resin solution usually needs thinning to hit a final viscosity suitable for aerosol application. The choice of solvents used for this purpose has a definite bearing on viscosity, especially in lacquer formulations. Obviously, a solvent in which nitrocellulose is most soluble is the most effective in reducing consistency. Ketones and esters fall into this effective class; hydrocarbons, though often used as thinners, are not good solvents. For aerosols, the actual paint formulation cannot be considered as strictly apart from the propellant, which is a fluorinated hydrocarbon. Most of the propellant in the container is in the liquid state, miscible with the solvents in the paint formulation. The effect is the same as if an ordinary poor solvent had been used as a diluent. For some reason, the propellant reduces the consistency of lacquer formulations more than alkyd resin formulations.

"This interaction of propellant and paint solvent often takes strange shapes. In some cases the resulting solution has a vapor pressure lower than expected. In others, azeotropic mixtures result, with vapor pressures higher or lower than any of the individual components. In coating formulations, the effect of the solvent on the pressure is usually much less than the effect of the propellant concentration, but in some cases this effect is significant."

Other Formulation Problems

In addition to compatibility and viscosity problems, the formulator of aerosol paints also faces some of the same formulation problems which are common to conventional lacquers and enamels designed for brush or conventional spray application. These include sagging, gloss, lifting, orange peel, bubbling and blushing. These problems generally yield to solution by standard methods, but in some cases the inclusion of propellant and low boiling solvents in the formulation may exaggerate the usual unfavorable effect.

Blushing is cited as illustrative of this point. It is caused by condensation of moisture on freshly applied coatings and precipitation of the resin. In aerosols, the propellant evaporates very quickly; this lowers the temperature of the coating to a greater extent than is usual with brush-type lacquers.

"The answer here is to add a small amount of high-boiling, powerful solvent. This simply redissolves any of the resin that precipitates, and blends it into the final film.

"Another problem that can be solved by adding high-boiling solvents is that of bubbles and craters in the dried film. This is another trouble that is accentuated by aerosol application, especially in fast-drying formulations. It is especially marked when a heavy coating is applied; and the paint formulator has very little control over how thick a coating the eventual user is going to apply. The nature of the resin and the solvent balance are other factors that influence the tendency to form bubbles and craters. High viscosity formulations are more apt to show these defects than are those of lower viscosity.

"Another serious problem is the tendency to produce an extremely fine mist which floats away in the air or dries before it hits the target. This situation is generally corrected by lowering the pressure and increasing the viscosity. The design of the valve also influences the amount of misting that takes place.

"Each coating takes a slightly different type valve, or a different orifice size. But at the same time you can't change the orifice diameter too much. This important dimension must be within a pretty narrow range to work with aerosol sprays. Radical departures from this optimum are almost always failures. Small orifices tend to shoot out a stream rather than a spray, while larger sizes will spray all right, but with an excessive delivery rate."★

— Convention Calendar —

National Chemical Exposition, *Public Auditorium, Cleveland, Ohio*.....Nov. 27-30

Chemical Specialties Manufacturers Association, *Mayflower Hotel, Washington, D. C.*.....Dec. 3-5

American Pharmaceutical Mfrs. Assn., Mid-Year and Eastern Section Meetings, *Waldorf-Astoria, New York*.....Dec. 10-12

National Canners Association, 50th Anniversary Convention, *Conrad Hilton Hotel, Chicago, Ill.*.....Feb. 16-19, 1957

Canning Machinery and Supplies Association, annual exhibit, *Conrad Hilton Hotel, Chicago, Ill.*.....Feb. 16-20, 1957

National Packaging Exposition, International Amphitheatre, Chicago April 8-11, 1957

Chemical Specialties Manufacturers Association, *Drake Hotel, Chicago, Ill.*.....May 20-22, 1957

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Want your share of the $250,000,000 aerosol market? Looking for the best way to get in on skyrocketing aerosol sales . . . up 32% in 1955 over '54 . . . up to 240,000,000 units with no end in sight?*

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*Aerosol Pressure Products Survey, Chemical Specialties Manufacturers Association

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This is possible because there are many highly capable "Contract Fillers" throughout the country who will put up your product in aerosol form in quantities as low as a few thousand. These Fillers offer a wealth of accumulated experience invaluable to the newcomer to aerosol marketing. For a list of Aerosol Contract Fillers, write to General Chemical.

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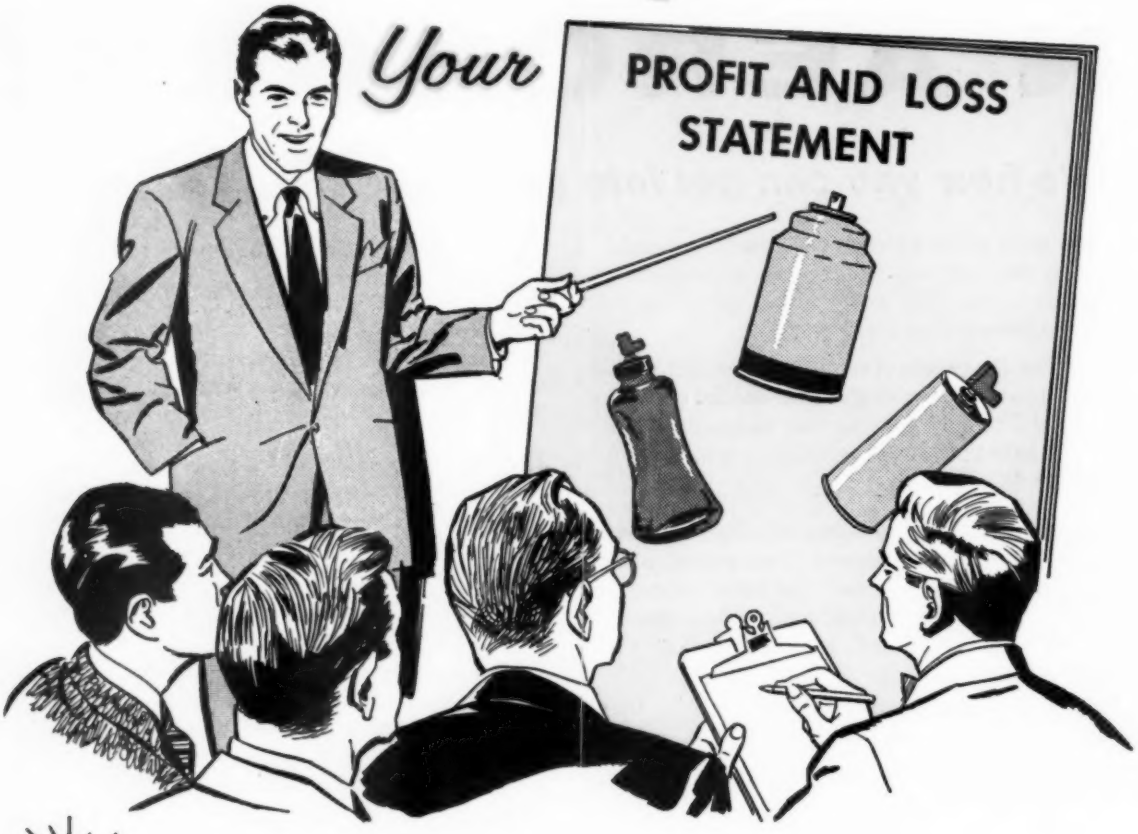

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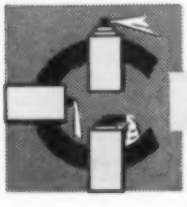

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Pressure Packaging Overseas

Dr. Tom C. Clark of Druk-Pak, Ltd., Zurich, believes that by mid '57 the European aerosol industry will be booming, with a possible shortage of containers, valves and propellants

THE European aerosol industry is now at that in-between development stage which characterized the U.S. industry between 1950 and 1952. In the U.S. at that time, a few companies had gotten a head-start and the product had caught on. Generally speaking, the firms who took the lead were not old-line companies but some "youngsters" with the energy, foresight, courage and just enough money to see them through. But the "oldsters" eyed their take and their pride suffered.

When this happens in large corporate organizations, it is a call to action involving committees and special studies. The inevitable course of this committee work is to invent, dig out, emphasize and put together all possible arguments against the project. This is called either "tossing the ball around" or "letting everyone have his say." Of course, the big boss knows all along what he is going to do and in the end all agree with him. The U.S. industry went through this stage in the early 1950's and Europe's old-line houses are advancing on it now.

This summer, for the first time, Shell's "Shelltox," Esso's "Flit" and Geigy's "Neocide" appeared, locally aerosol packaged, in practically all European countries, Geigy finally getting its insecticide out in its own backyard, Switzerland. In Germany, the big house of Ferd. Mulhens "4711" has yet to put an aerosol package on the market, and Mouson, although experimenting, still drags its feet. In France, the U.S. houses, such as Rubinstein, Arden, Helene Curtiss and Revlon, have stolen the lead from the exclusively French companies. Only in the U.K. have local companies such as Yardley, Max Factor, etc., put out some of their products in aerosols. With U.S. competition leading the way and enough local companies participating, this leaves the established houses scratching their heads and setting up committees.

In the European corporate structure, the committee treatment is very similar to that in the U.S., except that, by natural disposition, the European committee-man starts with a more negative attitude. To some Americans, this may seem an implausible exaggeration, but it is true. The first European reaction to a new idea — particularly one from the U.S. — is "it will not work," "it costs too much," "people will not buy it," "well, that may go in America but it will not go here." And they are conclusively positive about it, repeating "ausgeschlossen" (out of the question), "impossible" (no translation necessary), "njet."

Now, in reality and knowing these people and these conditions as we do, the exclamations should be interpreted somewhat as follows: "What are the manufacturing costs?", "where can we get the propellants?", "is it better to use glass or metal containers?", "how soon can you deliver the filling machinery?", "do you have the valves and how much do they cost?", "how soon could you put us in production?", etc., etc. After listening for hours to the negative side, we have even suddenly been asked: "But you mean you can actually get us into practically immediate production for a capital outlay of something under $5,000?". Yes, we meant it. At this juncture, the project goes back for further study.

With the manufacturing question satisfactorily answered, the study advances to commercial research, sales arguments and buying habits. Here, the European goes completely subjective, measuring everyone else's reactions in terms of his own not very sales-enlightened ones. It is not so much a matter of thinking up positive sales arguments as making up arguments to overcome imaginative sales resistance. Here he is a past master completely unencumbered by statistics, charts and graphs of the American pattern. Direct selling is the exception, not the rule in Europe, so European industrial management does not have that close contact with

(*Turn To Page* 34)

Here's a big market...

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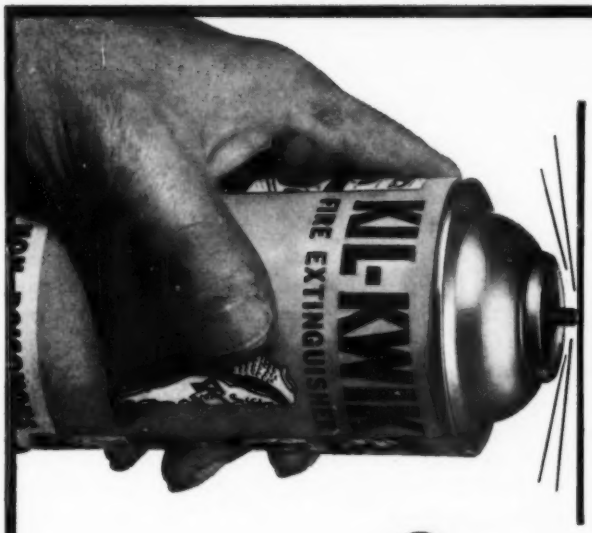
AEROSOL VALVES made by the
manufacturer of the Standard Tire Valve since the first Automobile



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1 STRIKE OR PRESS TIP AGAINST HARD SURFACE . . .

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Get into the growing home fire extinguisher market *fast* with Schrader. Order the single-discharge valves you need . . . now. Absolutely non-clogging, positive action of the plastic valves makes them practical for your mass selling. Gas-tight feature of valves makes your fire extinguisher safe to store, handle. Schrader is a leading name in Aerosol valve field. Depend on Schrader for economy and good service.

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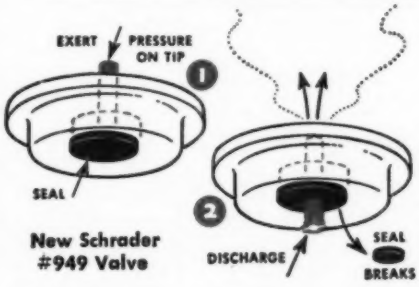

New Schrader #949 Valve

MAIL THIS COUPON TODAY

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Division of Scovill Manufacturing Company, Incorporated Dept. AA
470 Vanderbilt Avenue, Brooklyn 38, N. Y.

Please send me samples of Schrader one shot aerosol valves ☐ Price list ☐

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its consuming public. Sometimes, the director will take the opinion of his wife — never his secretary's — and that of a feminine house-guest or neighbor is preferred. Fortified with this back-log of independent judgment, he is ready to make his decision. Now come the real surprises.

Having finally, after months of procrastination and doubt, made up his mind to go ahead, he now does everything with a vengeance. Capacity, from that originally discussed, has to be doubled or tripled, and delivery schedules stepped up accordingly. If necessary, build a new plant to house the equipment, but make it large enough for future expansion. Money is suddenly no obstacle and, he is convinced a howling, hungry public awaits only the appearance of his product to snatch it off counters.

The apparent lull takes place while he is making up his mind and immediately before the storm. This is what happened in the U.S. in the early 1950's and what is happening in Europe now. Right now, the cosmetic house without a foam lather is adding up, on a yearly basis, the cost of a tube of shaving soap, cost of brush, soap, brush-holder, etc., and comparing the total with the retail price of a 6 ounce can. Conclusion: No one will buy it.

Meantime, he refuses to believe U.S. production at 50 million yearly, has never tried the product himself, cannot understand why his competitors are forcing him to the decision he knows he will eventually have to make, and is comfortable in making everyone else around him quite miserable. This is part of the simple way new industries and new products get born. By the middle of 1957, there is apt to be in Europe a shortage of cans and valves, and propellant manufacturers may well be ladling out their production on a quota basis to favored customers.

New Shaving Lather

ITALY'S first locally packaged shaving lather by Squibb, "Ultrarapida," hit the market last month priced at Lire 495 (about 80 cents — U.S.), attractively packaged in a 6 ounce aluminum two-piece container by Tubettificio Ligure. This is Europe's lowest retail price for shaving lather and will undoubtedly give the U.S. market domination a jolt. Their products are 25 to 40 per cent higher. The whole line of Italian produced aerosols are the lowest retail-priced on the Continent, and Italy is the only country where a 12 ounce can of insecticide costs less than $1.00. Also, Italian aerosol production still leads among European countries. To Europeans, these are unrelated facts. Most of them do not want to believe that lower prices can lead to larger turnover with greater profits. They prefer it the other way round.

German Cans

TWO new types of aerosol cans have appeared in Germany. One is drawn steel, Crown Can type shoulder, in 6 and 12 ounce sizes. The other is tin-plate or black-plate, three-piece, with an electrically welded seam produced by a new patented process and available in 6, 12 and 18 ounce sizes. The outside seam on this can is only about ⅛" wide (about ¼" internal metal overlap). We will be interested in seeing some of these cans with a lithographed body, as it appears the very small seam will allow a practically complete label. The prices of these electrically seamed cans are also the most reasonable on the Continent, the 6 ounce size being quoted at around 25 pfennig with internal lacquer, outside blank.

New HCl Aluminum Inhibitor

WE recently learned of tests about to be conducted on a HCl-inhibitor for aluminum aerosol containers which we understand is the first in the field. Hydrolysis has been a big problem with these containers, requiring careful formulation and special internal lacquers. We saw some

(*Turn To Page* 55)

I don't know how I got along before without aerosol deodorants!

Consultant's Corner

By Robert A. Foresman, Jr.

Personnel Education A Big Factor In Quality Control

QUALITY is a word of particular significance in the competitive business life of America and it is especially pertinent to our industry for a number of reasons. Most industries have only one end in view when they think of quality and quality control—that is customer satisfaction. Our industry has several other concepts in addition.

1. Aerosols come under the surveillance of various government regulatory and enforcement agencies and failure to comply with rules set down may result in condemnation, confiscation, or banning of sales.
2. Aerosols, when improperly packaged, can be dangerous and result in harm to a consumer with consequent expense and reputation damage to those responsible.
3. Our products can have their shelf life greatly influenced by filling plant operations. Faulty filling can actually cause complete destruction of large percentages of containers with substantial monetary loss.

The obvious importance of the quality of a product at the consumer level hardly needs comment. Needless to say, poor or inconsistent quality of any particular brand of aerosol will soon be reflected in decreased or non-existent sales. Quality of products and service, as it applies to contract filling, is a matter of acceptance in bulk by a purchasing agent or purchasing department buyer, and as such becomes a determinant in that purchaser's choice of a contract filler. Quality, in all aspects, must therefore be subject to complete and demonstrable operational control.

At first blush these comments may seem repetitious and perhaps inconsequential, but everyday happenings (admittedly in the minority) reveal the need for constant vigilance if competitive stature on the part of a filling plant operation is to be maintained.

Quality control as a production function must by its very nature deal with specific attributes and statistical trends. It is generally impractical to assign quality control personnel to each and every phase of operations or to even consider quality control a part of any but the technical side of filling. This means that many occurrences bearing on overall quality are not subject to direct quality supervision, or else will not be detected until the expense of an error is already incurred.

The bugaboo of the right ingredients, in the right proportion, with the right valve, being filled into the wrong specification can is something nearly every plant operator has experienced — especially true of paper label packs. The parallel situation where everything is correct but the valve, is certainly not unknown and this can involve, without any particular genius for error being exercised, large quantities of lithographed cans.

Wrong propellant, incorrect quantities, lax fill tolerances, incorrect labels or cartons, or even incorrect stenciling of consignee's name or address are all possibilities and all have occurred. Even wrong sized containers have been filled with expensive or timewise irreplaceable customer-provided concentrates, with the result that despite an individually perfect package the service provided the customer has been of the very lowest order of quality.

While there are many techniques and procedures which contribute to quality control, I am convinced that one of the greatest sources of failure is lack of awareness of what is required on the part of the production line personnel. Communication by management with this group covering all aspects of their function in turning out the end product is most important. An awareness of what constitutes a quality package or quality service and the influence of each particular operation in achieving desirable quality should be instilled in each worker. While no plant can operate effectively with each person acting as a supervisor, the vigilance resulting from each operator watching for errors intelligently and with a knowledge of the overall picture can frequently make the difference between a profit and a loss in an individual pack, and in the aggregate can be a factor in the maintenance of a good reputation with all of a plant's customers or potential customers.

One of the major reasons for difficulty in our "canning" operations as compared with the rest of the canning industry, is the similarity of appearance of many concentrate materials, and the relative ease with which various concentrates may be mixed without the mixing being immediately obvious. This trouble can occur in changing products in storage and mixing tanks, but is much more likely to result when, perhaps for emergency reasons, marginally competent workers are

(*Turn to Page* 54)

African Pyrethrum

It's a fact Insects are not resistant to Pyrethrum

PYRETHRUM, harmless to human and animal life, is

Unsurpassed in Quick Knock-Down

Economy in Concentration With Synergists

Rapid Dispersal High Penetration

PYRETHRUM offers highest protection for

Tobacco Storage

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65 Pine Street, New York 5, N.Y.

Please send me____copies of free booklet, Pyrethrum Facts.

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CITY_____ STATE_____

P·Y·R

AFRICAN PYRETHRUM

Who's Who in the Aerosol Industry

Edmund D. Bennett, son of the founder, has been president of the Fluid Chemical Co., Inc., Newark, N. J., since 1938 and has steered its entry into the expanding contract aerosol packaging field. Born in Rome, Italy, and educated there and in local Newark schools, he joined the company way back in 1931, and from the beginning gained valuable experience in running and setting up liquid filling lines.

Under his administrative hand, Fluid Chemical has expanded considerably, moving from the fairly simple filling of household bleach bottles to the complex problems of the various types of aerosol filling. With its present expasnion program, Mr. Bennett's company is making plans and allocating space for every type of aerosol filling, including both heavier-than-water and lighter-than-water three phase systems. By the time the expansion is completed, Fluid will be among the very few companies in the country offering such a diversified scope of aerosol filling equipment.

Mr. Bennett's two brothers, Mario and Andrew, have been handling plant operations while he himself directs administration and sales activities. They are highly enthusisatic about the future possibilities for aerosols, and are basing their expansion on this optimism.

Dr. J. Mason Pilcher, assistant division chief in the Department of Mechanical Engineering at Battelle Memorial Institute in Columbus, Ohio, is in charge of aerosol research and has conducted a number of investigations on methods of producing and determining the particle-size distribution of aerosols.

Dr. Pilcher first became interested in aerosols while making fundamental studies of the combustion of fuel mists at Battelle in 1950. This work naturally led to studies of the drop-size distributions of fine sprays, and later to particle-size determinations for commercial aerosols.

A native of Virginia, Dr. Pilcher received his B.S. and M.S. degrees in Chemical Engineering from Virginia Polytechnic Institute in 1934 and 1936. He joined Battelle in 1936 as a research engineer, studying the ignitibility of coal and methods for treating coal to alloy dust.

In 1940 he joined the research staff of the Mineral Industries School of the Pennsylvania State University, where he conducted research on domestic bituminous-coal stokers. After four years in the Army Corps of Engineers he returned to Penn State to receive his Ph.D. in Fuel Technology in 1948. Since graduation he has been with the Battelle Institute.

Dr. Pilcher presented two papers on aerosol research at the past two meetings of the Chemical Specialties Manufacturers Association. They were entitled "Characteristics of Aerosols" and "The Cascade Impactor for Particle-Size Analysis of Aerosols."

Dr. Tom C. Clark, originally from Canton, Ohio, has moved to Zurich, Switzerland, without much difficulty. Acknowledged as one of the pioneers in aerosols in Europe, Druk-Pak Inc., with which he is associated, is acquiring world prominence.

Originally a lawyer by profession, Dr. Clark left a New York law practice to become assistant to the vice-president, Bethlehem Steel Co., and was later assistant to the president of Air Reduction Co. He obtained his Ph.D. at the University of Vienna, followed that with a few years' teaching at Princeton University, and for two years served in Paris as Chief of the Iron and Steel Section of the ECA.

At the end of 1954, he and his associates organized Druk-Pak Inc. with offices in Zurich, after testing models of aerosol valves and equipment, and establish-

(*Continued on Page* 55)

NEWS of Pressure Packaging

Rand Enters Aerosol Paint Field

The newly-formed Rand Aerosol Corp., with offices at 2626 South Dearborn St., Chicago, has recently entered the field of aerosol paint manufacturers and fillers, and has announced plans for nationwide distribution of aerosol paint products.

Officers of the new organization include Albert Randall, of Rand Chemical Products Co., Chicago, and Eugene Learner, of Inland Paint & Chemical Co., also of Chicago. The Rand Co. has been a manufacturer of industrial paints and finishes for 20 years, while Mr. Learner is one of the pioneer paint chemists and fillers in the aerosol industry. According to the announcement, both Rand and Inland plants will be used in the manufacturing operations of the new corporation.

•

Packaging Award Details

Details of the Packaging Institute's annual awards for outstanding contributions to packaging technology were announced recently in a special institute press release. Copies of the annual awards brochure and of the entry blanks are available at the Institute's offices, 342 Madison Ave., New York, N. Y.

The announcement lists two separate awards, The Corporate Award and The Professional Award. The first will be given annually in "recognition of an outstanding advance in applied packaging technology to that company which has commercially integrated packaging materials, equipment, and methods in the packaging of its product." It will be open to any U. S. corporation which performs a packaging operation, whether or not it is a member of the institute.

The Professional Award will be presented, also on an annual basis, "to the individual who . . . because of his pre-eminence in . . . and contribution to . . . the field of packaging technology . . . is deemed worthy of special recognition." Award winners will be selected by two separate juries comprised of business, education, publishing, and government leaders.

•

Semisch for South Pennsalt Sales

M. W. Semisch

Merle W. Semisch has joined Pennsalt Chemicals as Southern district manager of the company's Isotron refrigerants sales. From headquarters in Decatur, Ga., he will also supervise activities of manufacturers' representatives handling Isotron refrigerants, one of a new line of fluorine-base products currently being introduced by Pennsalt. Mr. Semisch was a manufacturer's representative in the southern states prior to his affiliation with Pennsalt.

•

Propellant Prices Cut

A widespread adjustment of prices on two of the leading aerosol propellants was recently announced by the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del. Effective Nov. 1 prices of Freon-12 and Freon-11 were decreased 1.2 and 7%, respectively, in tank-truck and tank-car quantities. At the same time the prices of mixtures of the two propellants were increased 4%.

The change drops the per-pound price of the propellants in tank-car and truck quantities $.20 in the case of propellant 11 and $.253 for propellant 12. Both prices are f.o.b. plants at Carney's Point, N. J., East Chicago, Ind., and from the new installation at Antioch, Calif. No. 11 in ton tanks will also be reduced to $.21 per pound, a decrease of one and three-tenths of a cent per pound.

Helene Curtis Buys Lentheric

The purchase of the Lentheric division of Olin Mathieson Chemical Corp. by Helene Curtis Industries, Inc., was announced October 10th by Willard Gidwitz, president of Helene Curtis. The purchase price was not disclosed, but partial payment was made in cash, and the balance in stock. Olin Mathieson acquired Lentheric when it merged with E. R. Squibb & Sons in 1952.

Lentheric grossed around $7,000,000 last year, with a net profit of approximately $350,000. Mr. Gidwitz was reported as stating that sales this year will run over $10,000,000, with a "satisfactory" profit picture.

Thomas S. Nichols, president of Olin Mathieson, said that sale of the Lentheric division was "consistent" with his company's policy of "concentrating in its major fields of activity."

•

Paint Prices Raised

Last month two major paint producers, National Lead Co. and E. I. du Pont de Nemours, & Co., announced a 15 to 20¢ per gallon rise in the price of wholesale paints, pointing to a possible industry-wide price boost of 3 to 5%. Two other producers, Sherwin-Williams Co. and Glidden Co., both of Cleveland, had earlier raised their prices. The rise will include various consumer paints, including exterior and interior house paints, but will not take in industrial and automobile finishes.

•

Wins Packaging Award

James W. Hackett, Owens-Illinois Glass Co. director of research, was announced recently as first winner of the T.O.C. Award offered by the Technical Operations Committee of the Packaging Institute. The award presented each year to the individual

who presents the most informative paper of greatest technical value at the annual forum of the Packaging Institute, was for Mr. Hackett's paper which was selected from among 45 technical papers at the annual forum in September.

•

Supreme Court Backs Carter

The Supreme Court of the United States last month upheld the validity of the aerosol-type pressurized shaving cream patent of Carter Products, Inc., New York, thus ending a legal fight that had lasted since March, 1955. The court turned down a petition of Colgate Palmolive Co., accused of infringing the Carter patent, and refused to reverse or review the decision of the U. S. Court of Appeals which upheld the Carter patent.

Colgate-Palmolive had contested the decision on the grounds that Carter, manufacturer of "Rise," had merely combined known ingredients to perform a known purpose, and contended that the patent would enable Carter to "monopolize the use of pressurized packaging by the soap industry. The Supreme Court decision is expected to clear the way for several millions of dollars in infringement suits by Carter Products. The original suit listed Colgate-Palmolive Co., Jersey City, N. J., and the John C. Stalfort & Sons, Baltimore, which packaged pressurized shaving cream for the Mennen Co.

•

Con Can Sets Sales Record

The Continental Can Co., New York, has announced that it set a new record for earnings in the first nine months of 1956, and that sales for that period exceeded any full year in its history. Net sales for the period were listed $590,276,000, an increase of 15.6% over last year's $510,413,847. The figures excluded sales and income of the recently-acquired Hazel-Atlas Glass Co.

•

Gair Stock Trusteeship

Owens-Illinois Glass Co., Toledo, recently indicated that it would put into a trusteeship its ownership of 17% of the common stock of Robert Gair Co., Inc., if Gair's merger into Continental Can Co. is approved.

CSMA Recommends Minimum Fills For Aerosols

THE Administrative Committee of the Aerosol Division of the Chemical Specialties Manufacturers Association has recently approved a list of "recommended minimum fills" for aerosol containers for insecticides, room deodorants and artificial snow. This matter is under continuing study by the Commercial Standards Committee of the Aerosol Division which added four new aerosol containers to the previous list at the May, 1956 meeting of CSMA. The complete list was brought up to date, reviewed and approved by the Administrative Committee at its meeting in Osterville, Mass., September 25, as follows:

MINIMUM FILLS

MINIMUM Commercial filling of Self Pressurized Packages offers many problems. Special committees of C. S. M. A. are constantly studying these problems. There will be constant additions to this list. The following were recommended by the Commercial Practices Committee and adopted by the Aerosol Division.

(*Published in the Proceedings of the 38th Midyear Meeting of the C. S. M. A., Page 53, with revisions passed May 18, 1953 and May 21, 1956.*)

RESOLVED, That the following size packages are recommended for use of aerosols or pressurized products: namely, insecticides, room deodorants, and artificial snow, having no greater than 20% non-volatile materials in the formulation, to contain a label contents not under 12 ounces (avoirdupois).

1. American Can size 211 (2-11/16") diameter by 413 (4-13/16") body height.
2. Continental Can Company dome style can, size 211 (2-11/16") diameter by (4-13/16") body height.
3. Continental Can concave style, size 211 (2-11/16") diameter by 413 (4-13/16") body height.
4. Crown Can size 214 (2-7/8") diameter by 411 (4-11/16") body height.

RESOLVED, That the following size packages are recommended for use of aerosols or pressurized products: namely, insecticides, room deodorants, and artificial snow having no greater than 20% non-volatile materials in the formulation, to contain a label contents, not under 6 ounces (avoirdupois).

1. American Can dome or flat top style, size 202 (2⅛") diameter by 314 (3⅞") body height.
2. American Can size 202 (2-2/16") diameter by 406 (4-6/16") body height.
3. Crown Can squat style, size 214 2⅞") diameter by 212 2¾") body height.
4. Crown Can tall style, size 202 (2⅛") diameter by 411 4-11/16") body height.
5. Continental Can dome style, size 202 (2⅛") diameter by 314 (3⅞") body height.
6. Continental Can concave style, size 202 (2⅛") diameter by 314 (3⅞") body height.
7. Continental Can size 202 (2-2/16") diameter by 406 (4-6/16") body height.

The following cans to contain a label contents, not under specified weight:

1. American Can size 202 (2-2/16") diameter by 214 (2-14/16") body height. Not under 3 ounces (avoirdupois).
2. Continental Can size 202 (2-2/16") diameter by 214 (2-11/16") body height. Not under 3 ounces (avoirdupois).
3. Continental Can 211 (2-11/16") diameter by 510 5-10/16") body height. Not under 14 ounces (avoirdupois).
4. American Can 211 (2-11/16") diameter by 604 (6-4/16") body height. Not under 14 ounces (avoirdupois).
5. Continental Can 211 (2-11/16") diameter by 604 (6-4/16") body height. Not under 16 ounces (avoirdupois).

The Administrative Committee of CSMA's Aerosol Division has also defined "safe fill." A resolution was passed at the Spring meeting in Chicago, May 20-22, declaring that "An aerosol container is considered to have a safe fill if there is present within the container no less than seven and one-half per cent head space when the contents are heated to 130°F."

Valve Infringement Suit Settled

Precision Valve Corp., Yonkers, N. Y., announces the successful conclusion of its patent infringement action against Seaquist Mfg. Corp., Cary, Ill.

Under the agreement settling the litigation, the infringement of Precision's basic valve patent was admitted by Seaquist and a decree of the U. S. District Court dated October 1, 1956, enjoined the continued manufacture of the infringing valve by Seaquist except as permitted under the agreement.

Substantial royalties are to be paid by Seaquist to Precision under the agreement, which is limited to the U. S. and Canada, and which is subject to a number of restrictions as to the conditions under which Seaquist may henceforth make or sell valves as permitted by the agreement. Precision Valve Corp. will make the details of the restrictions available to interested parties upon request—and Precision is doing so with the desire to avoid confusion and to avoid placing unnecessary difficulty and hardship in the path of potential customers for Seaquist.

•

Joins Products Mfg. Corp.

Edmund Bennett, Jr. has taken over as general manager of Products Manufacturing Corporation, Little Falls, N. J. custom filler, effective October 1st. He replaces Samuel Freeman.

Mr. Bennett, the son of the president of Fluid Chemical Co., was previously with the company himself. Since taking his new post he has announced an expansion in the facilities of Products Manufacturing Corporation which will more than double their previous production. The company does liquid filling, specializing in aerosols.

•

CSMA Spring Proceedings

The proceedings of the mid-year (May 1956) meeting of the Chemical Specialties Manufacturers Association are now available for distribution by the association office. Copies have been mailed to all members and to all who registered at the Chicago meeting. Additional copies are available at $7.50 per copy (or $8.00 if outside the U.S.A.). The CSMA offices are located at 50 East 41st St., New York City.

For Maximum Safety in Aerosol Use

make sure that your labeling carries the following five-point caution statement:

1. **Contents under pressure**
2. **Do not puncture**
3. **Exposure to high temperatures may cause bursting**
4. **Keep at room temperature — away from direct sunlight, radiators, stoves, hot water and other heat**
5. **Never throw container into fire or incinerator**

Do Your Part To Keep The Aerosol Industry's Safety Record Spotless!

•

AEROSOL AGE

Coating for Glass Aerosols

FOR PACKAGING certain types of products to be dispensed as aerosols, glass containers are preferred because they allow the contents to be visible, as well as offering attractive physical forms and decorating advantages. Glass also offers advantages of economy over comparable metal containers. The prime disadvantage of glass, of course, is that it is so readily breakable, and, particularly for employment in the packaging of aerosols there is the hazard which can result should an accidental increase in temperature raise the pressure unduly and cause the glass to shatter.

This hazard exists with both low and high pressure aerosols, and the larger the container the greater the risk will be. In the U. S., regulations have restricted the use of glass in aerosols to containers of not more than 80 cubic centimeters (approx. 4.88 cu. in.). Incidentally there is no evidence that even extremely thick walls provide any effective protection against breakage of glass aerosol packages.

In an attempt to develop a means of treating glass which would avoid this hazard, a process has been patented in France, which involves coating the containers with a film, 3/10 to 4/0 millimeter thick, of polyvinyl chloride. When applied by a spray gun the film is said to adhere perfectly to the glass, acting as a binding agent and helping to hold the fragments to a matrix, avoiding shattering and dispersion should the glass break. Exclusive French rights to the process are held by Verrerrie Souchon-Neuvesel, under French Patents No. 70331 and 56448. (In the opinion of American authorities, such coatings would be suitable only for low pressure, low propellant volume application in small bottles. Editor's Note.)

To test effectiveness of the treatment, coated bottles larger than 100 cubic centimeters in size, charged with propellant, were submitted to 9 kilograms pressure. The bottles were torn, but there was no dispersion of glass.

The process not only makes it possible to use glass for aerosols and atomizers as large as 250 cubic centimeters, but also permits infinitely greater freedom in decorating through the use of color.

A Lorin, Plastiques de St. Denis. "Le Revetement Plastique du Verre", from the magazine *Parfums Cosmetiques Savons*, Paris, France, March 1956.

Canco Buys Tube Firm

The American Can Co., New York, recently announced the purchase of the Bradley Container Corp., Maynard, Mass., manufacturer of extruded plastic tubes and bottles. The Bradley concern, formerly a subsidiary of Olin Mathieson Chemical Corp., has been primarily concerned with research and development in the plastics field, and began commercial production of tubes and bottles last year.

It will continue to operate under its present name as a wholly-owned subsidiary of American Can. No changes are reported to be contemplated in personnel, policies or operations.

William C. Stolk, American Can president, will serve as president of the new subsidiary. L. A. Britzke, Canco general manager of engineering, was named vice-president and general manager.

•

Max Factor Expands

Max Factor & Co., New York, recently enlarged the operation of its newly-created Pharmaceutical Division to include handling of specialty products. The division, to be known as the Max Factor & Co. Pharmaceutical and Specialty Division will have its own personnel, sales, distribution, advertising, and discount organization.

At the same time the company announced that it has purchased all outstanding shares of Lee Ltd., trademark owner of "Sof-Set," "Dri-Mist," and "Sof-Set No-Lac," all of which will be manufactured, merchandised, and distributed by Factor's new division. Prior to the acquisition of Lee Ltd., that company and a subsidiary of Max Factor had been in partnership for distribution of the products.

•

"Holiday Aerosols" Suggested

Givaudan-Delawanna, Inc., New York, in the September issue of its house magazine, *The Givaudanian*, suggests to aerosol marketers that they consider merchandising special kits comprising a "quartet of holiday aerosols." The suggested combination package would include aerosol snow, an aerosol Christmas fragrance, a fire preventive for use on the Christmas tree, and finally, in case of trouble, an aerosol fire extinguisher.

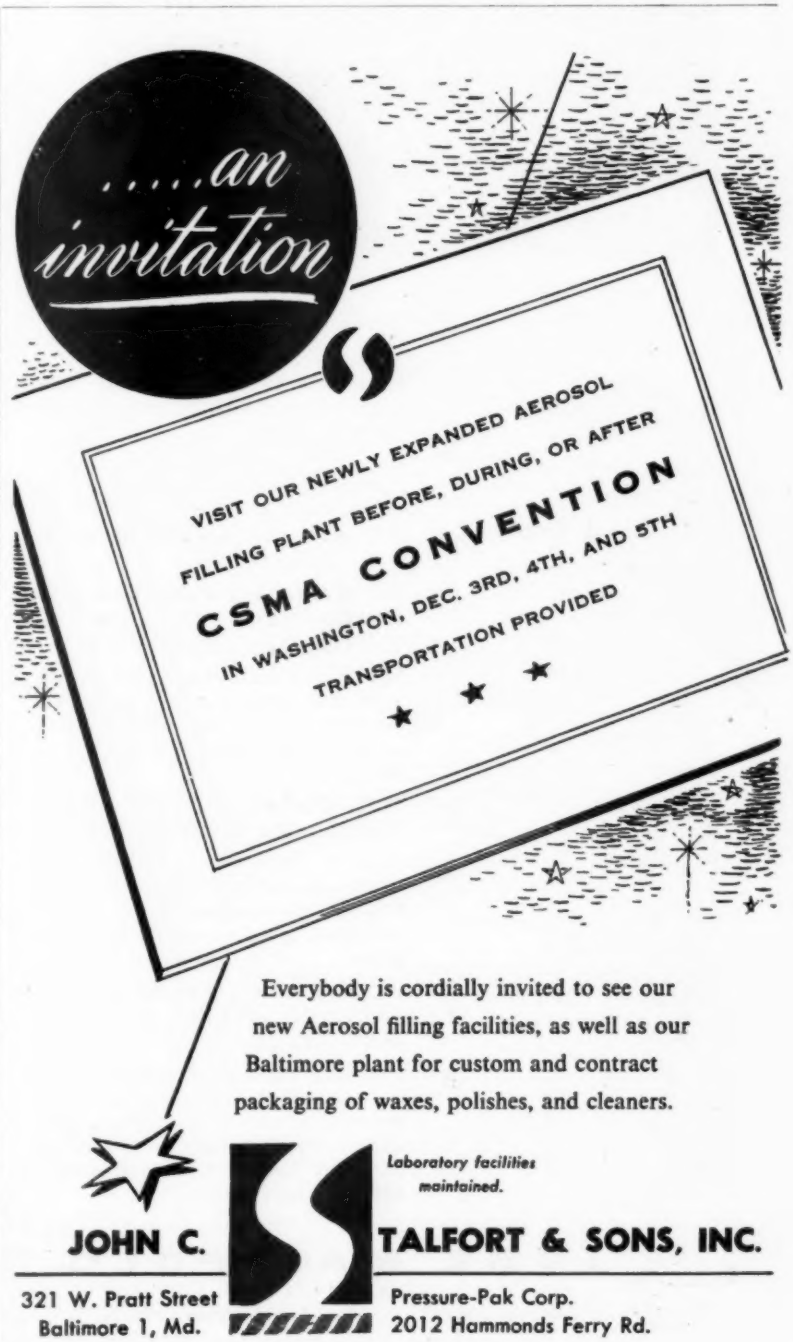
•

Lewis to Head Hazel-Atlas

Howard G. Lewis has been elected a vice president of Continental Can Co., New York, and will head the company's Hazel-Atlas Glass Division.

Givaudan Head Optimistic

E. R. Durrer, president of The Givaudan Corp., New York, and its associate companies, Givaudan-Delawanna, Inc., Givaudan Flavors Inc., and Sindar Corp., who recently returned from an extended trip to Europe, reports that the Western European countries are in the midst of a boom, and that Givaudan plants abroad are operating in high gear.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IN WASHINGTON, DEC. 3RD, 4TH, AND 5TH
TRANSPORTATION PROVIDED
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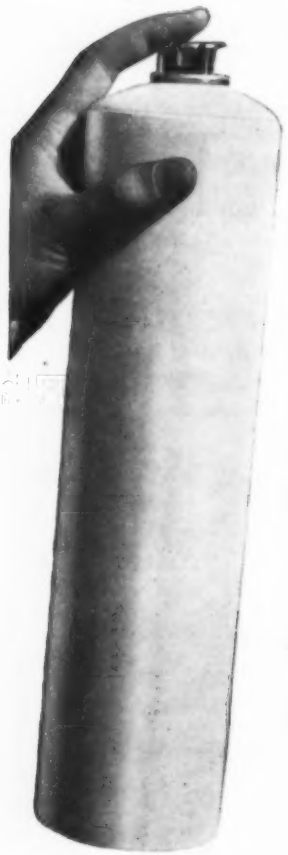
2012 Hammonds Ferry Rd.

QUESTIONS & ANSWERS ABOUT MARKETING UNDER PRESSURE WITH INDUSTRIAL SIZE TUBE MANIFOLD DISPOSABLE CONTAINERS



Q: HOW DO TMC INDUSTRIAL SIZE CONTAINERS INCREASE SALES?

A: TMC King Size Disposable Containers are giving manufacturers a new selling tool as potent for increasing industrial and commercial sales as the small can size containers have been in households the world over.

Q: WHAT TYPICAL PRODUCTS ARE NOW SUCCESSFULLY USING TMC DISPOSABLE CONTAINERS?

A: Insecticides, room deodorants, greenhouse and nursery sprays, stable and barn disinfectants, germicides, medical gases, fire extinguishers, Freon, stencil ink, etc.

Q: HOW DO TMC DISPOSABLE CONTAINERS CUT YOUR COSTS?

A: Accurate packaging by weight or volume, compact size, no deposits or refunds, no bookkeeping, no return transportation costs, no maintenance costs.

Q: HOW CAN WE LEARN ABOUT INDUSTRIAL SIZE AEROSOL MARKETING?

A: The Tube Manifold Corporation has wide experience in working with foremost manufacturers on applying TMC Disposable Containers to marketing. Write for "The Latest Thinking on Marketing Under Pressure."

TUBE MANIFOLD
CORPORATION
419 Bryant Street North Tonawanda, N. Y.
Fabricators of Tubular Products Since 1920

He praised coordination of extensive research work done by the Givaudan organization on both sides of the Atlantic.

•

Cont. Can Ups Container Prices

Continental Can Co., New York, has announced that as of Nov. 1 prices of its containers made of tin mill products will be increased by ten cents per base box to reflect the increased price of tin mill products as of the same date, plus 3% to cover other cost increases. The rise reportedly exactly reflects the steel companies' increase of ten cents per base box on tin mill products, also effective Nov. 1.

Continental Can reports that the 3% increase represents rises in labor and other costs, including materials, supplies other than tinplate, and freight, for which the company has made no adjustments since Nov. 1, 1955. The firm recently concluded a new three-year labor contract with the United Steel Workers, which reportedly will materially increase the labor cost in can-making.

•

Package Awards Competition

The Package Designers Council of the Toilet Goods Association, Inc., New York, last month announced its third American Package Design Exhibition and Competition. The aerosol industry and its packaging materials and processes will be represented, with winners to be announced at a special presentation luncheon on Feb. 15 in the Grand Ballroom of the Plaza Hotel, New York City.

Information and entry blanks are available at the PDC Competition Headquarters, 12 E. 32nd St., New York 16.

•

Bon Ami Sales Mgr.

The Bon Ami Co., New York, an affiliate of United Dye and Chemical Corp. and a recent entrant in the aerosol field, last month announced the appointment of John A. McDonald as general sales manager for the United States and Canada. He was formerly southeastern sales manager with Durkee Famous Foods.

Editor's Mailbag

(*From Page 4*)

"We are a subscriber to your very fine publication AEROSOL AGE.

"We are setting up a plant to provide cold fill private label packaging service in this area. Since there are many fine, proven aerosol formulations already available in the industry, we hesitate to risk experimentation with new formulas for standard type products, (Room deodorants, moth proofer, plastic spray, rust preventative, insect spray, paints, etc.)

"Are there any 'stock' formulations available? Where can we get them, and what, if any, patent rights are involved?

"Thank you."

A. J. Tulkoff
AEROSOL OF GEORGIA
Atlanta, Ga.

This inquiry was referred to several firms that offer stock formulations for the aerosol packager.

We are readers of *Aerosol Age* and find that it is of considerable help to us in the development of the aerosol business in Japan where aerosols, incidentally, are showing considerable promise for the future. Two of our regular customers have also expressed keen interest in your publication and have asked us to see that subscriptions are entered for them. Please send us two additional subscriptions each month, if possible starting with the first issue—May 1956.

K. Itoh
KING AEROSOL CO.
Osaka, Japan

We are in urgent need of 10,000 caps for an aerosol container. Can you give us the name of a manufacturer of these caps. It is most important that we have them completely lithographed in a very short time.

A. M. Lubbers
SPRAY TUBE IMPORT CO.
Amsterdam, Holland

This inquiry was referred to a cap manufacturer.

Your review is the only unpartial and reliable material which we have been able to get hold of to help us in our work as contract loaders in the aerosol field. We can not afford to miss a copy of *Aerosol Age* and we not only congratulate you, but thank you as well for the valuable help you are giving us.

Andre Adins, Ltd.
Kortrijk, Belgium

We are installing an aerosol filling plant here in Argentina and have had very good reports about your new publication. We are sure that the material which you have published in AEROSOL AGE will present for us a valuable aid in starting a modern aerosol plant in our country.

Dr. Emiliano F. Ruth
OLIVOS FCNGBM
Monteverde, Argentina

We have a problem on which we would appreciate having your advice to help us reach a solution. In a new multi-storied building we have acquired, we have been stymied in our plans for conversion by not knowing whether it is possible to have the aerosol filling done on the second floor, while the cylinders of propellant are placed on the ground floor.

The loading capacity of the second floor is not adequate to take a weight of two tons (the weight of a 1-ton capacity cylinder when full). It is for this reason that we wish to keep our cylinders on the ground floor and fill on the upper floor.

This necessitates having to raise the gas at least 20 feet vertically and about 120 feet horizontally. In other words, the cylinders being on one side of the building on the ground floor, we have to move the propellant up 20 feet to the second floor, then across the length of the building (approximately 100 ft.) and then 20 ft. again at a right angle to join up with our filling head.

Smaller cylinders than 1-ton are not available in this country.

Can you offer any helpful suggestion?

Alec Rimer
BENEDIX (PTY.) LTD.
Johannesburg, S. Africa

This subscriber's inquiry was referred to competent aerosol consultants.

It was an excellent and thoughtful suggestion of Mr. Frank Child of Packaging Institute, Inc. that I become acquainted with you.

Thank you very much for the helpful advice you gave me in the matter of my interest in evaluating the commercial usefulness of the aerosol packaging patents for which I am trying to find suitable applications.

The copies of *Aerosol Age* which you gave me are being studied with much interest and I feel confident that you and your excellent paper will be of much help to me in learning more about aerosol matters.

With appreciative regards and many thanks for your friendly interest.

Herbert B. Larner
Montclair, N. J.

Aerosol Valves

(*From Page 11*)

where the concentrate is water based. Here the propellant phase is insoluble in the concentrate and acts strictly as a means to develop pressure for the dispensing of the concentrate. Hence, on opening the valve, the material coming from the container is, strictly speaking, only product with no propellant admixed.

Using ordinary aerosol valves for this type product would produce a

News...

News about their industry, — fresh news about what is happening in the trade, — what their suppliers and competitors are doing. That's what the average subscriber is most interested in seeing in the trade paper which he reads.

There is an old saw in the publishing business, — something to the effect that publishers don't make the news, they just print it. And it's very true!

We will do our best to print everything newsworthy that concerns the aerosol industry and those in it, but we are necessarily going to be mighty dependent on our good readers to keep us informed on what they are doing.

If you bring out a new product, add a new man, open a new office, develop a new process, or install new production lines, try to remember to let us have the details. A free and rapid exchange of information on all that is new in the field can be very helpful. And we will appreciate the assistance, too.

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IF you have an aerosol packaging problem, we can do the job for you. Our latest research facilities and production equipment will handle any difficult or unusual formulation. Here are a few of the many products we are now filling successfully:
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jet stream of liquid with no apparent breakup. The type spray pattern desired is a relatively fine mist as is obtained with a garden hose nozzle when it is in the almost closed position. The problem has been solved by what is called a three phase actuator or mechanical breakup actuator. The principal function of these actuators is to dispense the ingredients as a fine mist. This is accomplished by a small passage or series of small passages leading into a swirl chamber which allows the concentrate liquid to move in a circular pattern at a high velocity. The swirling concentrate then exits through the external orifice into the atmosphere as a fine mist.

These actuators are currently being produced by Precision Valve Corporation, Risdon Manufacturing Company, V. C. A. Incorporated, Aerosol Research Corporation and Calmar. Of the five companies listed, Precision Valce Corporation is the only one that produces a molded one-piece actuator, while the other four companies produce actuators made up of two separate pieces which must be assembled.

Actuators of this type open a new field of thinking in formulating aerosol products. Compatibility of propellant and concentrate is no longer necessary to obtain a desired spray pattern. Although these actuators will now also make possible a reduction in the amount of propellant formerly necessary for correct product breakup they may never achieve the breakup required for products such as space insecticides, where a very small particle size is necessary for true effectiveness.

Another field which is seriously considering the pressure packaging of products, is the food industry. This large volume industry may very well revolutionize the pressure packaging field. The number of food products adaptable to this type packaging is staggering. A beverage concentrate which was packed this past spring, became the third food product along with whipped cream and pancake mix to be pressure packed. Pressure packaged foods will require valves which produce foams, liquid streams and fine spray patterns. Valve parts will have to be made of non-corrosive and non-toxic materials. New valve designs will undoubtedly be necessary and many ideas for food valves are new being investigated.

Aerosol packaging procedures have also made valve modifications necessary. Valves can be assembled into an aerosol package with a minimum of trouble when refrigeration filling is employed. When a product is packaged by the pressure filling method, however, valves designed for this type filling must be used for maximum efficiency. Although the speed of filling through a valve is of prime consideration when pressure filling, other requirements are also of importance. These requirements are low gas loss, consistent results as concerns amount of propellant filled, and a minimum of rejects which might be due to the filling procedure or other reasons. These factors are important, since it would be foolhardy to use valves which fill fast but result in large gas losses, inconsistent package weights, and a higher than normal reject percentage. The valve manufacturer has kept all these factors in mind when designing pressure filling valves, hence valves are available which meet all of the above requirements.

It is not inconceivable, considering all the valve variations discussed, that a valve manufacturer can offer as many as three hundred different valve models. Valve design changes will continue as long as new products, new containers, new packaging principles, and more exacting performances make these changes necessary.

The suitability of aerosol valves for products can best be determined by cooperation between the user and the valve manufacturer. The user knows what he wishes in valve performance. By discussing his needs with the valve manufacturer he can have these requirements fulfilled. Many of the developments discussed have been the result of close working arrangements between user and valve manufacturer. The problems will be many in the future, but the solutions will also be many, as can be indicated by past performances.★

Products— Processes— Bulletins—

Mojonnier Pre-Mix Combiner

Mojonnier Associates, Inc., Franklin Park, Ill., have announced the development of the "Synchromatic" aerosol pre-mix combiner, a unit that combines the product with the propellant at room temperature and under pressure prior to refrigeration. In the new system the mixed product is then refrigerated in its combined state and filled in a single Mojonnier "Electromatic" filler.

The combiner consists of two air-operated pumps, and two weight-loaded accumulators, one of each for the product and one of each for propellant. The unit is air-operated and electrically controlled, and is adjustable to give any proportion of product and propellant.

Mojonnier advises that the pre-mix unit should not be used with products which will not combine, nor with a product that will throw out of solution with the propellant during refrigeration.

•

"Aerosol Story" Published

"The Aerosol Story," a 48-page brochure fully illustrated with up-to-date pictures and research data, has just been published by Dodge & Olcott, Inc., New York. It traces the industry from its inception in the malaria-infested islands of the South Pacific to its present eminence in today's market.

The booklet discusses types and principles, propellants, containers, valves, laboratory tests, labeling, and pre-marketing checks, and a section is devoted to the task of perfuming the diverse aerosol products on the market. In this latter section are listed compounds for such items as colognes, hair dressings and lacquers, hand lotions, insecticides, moth proofers, shampoos, shave creams, and space deodorants. In addition, seven pages of complete aerosol formulations are presented, plus a current listing of valve and container manufacturers and contract fillers.

The brochure is bound as a 9 x 12 file folder, and copies are available by writing to Dodge & Olcott, Inc., 180 Varick Street, New York 14.

•

New Fritzsche Price List

Fritzsche Brothers, Inc., New York, last month issued a new price list for its line of essential oils, aromatic chemicals, etc. The catalogue lists each of the products alphabetically, together with container size and price. It is available to buyers of wholesale quantities at the firm's offices, 76 Ninth Avenue, New York 11.

•

Labeler for Aerosol Cans

Burt Machine Co., Baltimore, has designed and is offering a specially built labeler for handling aerosol containers. It will handle either right hand or left hand underlap labels. It incorporates many special features to assure that labels applied on the round aerosol type containers will have better register at the laps.

Laboratory Pressure Filler

A laboratory pressure filler for aerosols is offered by Builders Sheet Metal Works, New York, for metering liquids under pressure into aerosol containers. The burette, available in either 30 ML or 100 ML sizes, is encased in a heavy Lucite tube as a safety feature.

•

New Moth Proofer by R & H

An insecticide concentrate designed specifically for use in pressurized moth proofing sprays and household aerosols has just been announced by Rohm & Haas Co., Philadelphia. The toxicant employed is "Perthane." It has been offered previously in technical form, but is now available as a 75% solution in methylene chloride for use in formulating aerosols and pressurized sprays. "Perthane" has been approved for use in pressurized moth proofing sprays in concentrations as high as 6%, and in house-

The new model (AU-404) Burt Labeler for aerosol containers was first shown publicly at the recent Packaging Show in Cleveland.

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(*From Page* 45)

hold space aerosols up to a level of 3%.

Carlos Kampmeier, sales manager for the Agricultural and Sanitary Chemicals Department of Rohm & Haas, advises that the new concentrate contributes unusual ease of handling and formulation in pressurized sprays and aerosols, in addition to high killing power against many insect pests, good solubility in odorless solvents and low mammalian toxicity. He stated, "The low toxicity, both oral and percutaneous, good solubility in deodorized aliphatic solvents, and high kill and residual effectiveness against a number of household insects including moths and carpet beetles has won for Perthane wide acceptance in aerosols and pressurized sprays. While retaining all these basic Perthane advantages, the new concentrate eliminates a number of formulating and handling problems."

New Aerosol Valve Clincher

Continental Filling Corp., Danville, Ill., has recently developed a new high-speed valve clincher which will make possible faster speeds in the packaging of low pressure aerosols. The new equipment, developed by J. Allen Reynolds, vice-president in charge of operations for Continental, operates at speeds up to 300 cans per minute.

It provides uninterrupted clinching without gaps between collett teeth, and reduces possibilities of future leaks from incomplete valve clinches or broken collett teeth segments. The new clinchers have been in use at Continental Filling Corporation's Hobart, Indiana plant since Oct. 1, 1956. More of the new equipment is being manufactured and installed in all filling lines at the company's plants in both Hobart, Indiana and Danville, Illinois.

For the first time valves can now be clinched at speeds far in excess of the needs of any present aerosol filling line. Such a development opens the way to exploration of speed-up techniques ahead of the clincher. Air or mechanically operated equipment available in the past has been limited to a maximum of 60 cans per minute.

"This development allows a smoother, faster filling operation which will greatly increase our plant capacity," declared Continental's president, Clarence F. Carter. "It will mean greater filling economy and speed of delivery than ever before."

•

Negotiate for Olive Can

Caspers Tin Plate Co., Chicago, recently announced that it is negotiating for acquisition of the Olive Can Co. in a move to further enlarge and diversify Caspers' operations. On August 1 Caspers purchased Century Display Mfg. Co., Inc. and its subsidiary, Paramount Metal Products Co., both in Chicago.

Olive Can is engaged in the manufacture of lithographed cans for use in packaging specialty foods and other products. Albert Armato, in charge of operations of Olive Can, will remain with the company as vice-president and general manager.

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OIL BOUQUET E.T. No. 3126
OIL BOUQUET P.C. No. 3127
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New Aerosol Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication.

Complete copies of these patents may be obtained by writing to the publisher of this magazine, Aerosol Publications, Box 31, Caldwell, N. J., and remitting 50c for each copy desired. For orders received outside of the United States the cost will be $1.00 per copy.

2,760,704 Cut-Off Mechanism for Filling Machines. Patent issued August 28, 1956 to Paul R. Fechheimer, Cincinnati, Ohio, assignor to The Karl Kiefer Machine Co., Cincinnati, a corporation of Ohio. In a filling machine, a filling head having at least one filling spout structure associated therewith, container receiving and positioning means for juxtaposing containers to said filling spout, drive means for moving said container receiving and positioning means in a predetermined path of travel, a source of filling material under pressure connected to said filling head, valve means for controlling the flow of filling material to said filling head, and means responsive to the starting and stopping of said drive means for opening and closing said valve means so as to supply filling material under pressure to said filling head only at such times as said drive means is in operation.

2,764,453. Spray Valve and Closure Assembly. Patent issued Sept. 25, 1956 to Wayne F. Robb and Bert W. Myer, Jr., Denver, Colo., assignors, by mesne assignments, to Yorker & Sons, Inc., a corporation of Colorado. A dispensing structure comprising a pliable chambered body for containing a liquid to be dispensed and being provided with a neck portion, the liquid within the body normally being maintained at a level to provide an air pocket thereabove, a plug supported in said portion and having a top surface with separate air and liquid ports extending therethrough and communicating with the interior of the body, a closure cap mounted for rotation relative to said plug and said portion, said cap having a working surface cooperating with said top surface to provide a liquid and air seal for said ports, a relieved area in said working surface and cap and a discharge bore in said cap communicating with said area, means within the body for conveying the liquid to said liquid port upon sufficient deformation of the body, both the liquid and air being under pressure at their respective ports when the body is deformed sufficiently, said area being of a size whereby when said cap is rotated a first predetermined amount the ports will separately communicate with said area and air and liquid under pressure from the body will be mixed in said area so that discharge from the bore will be in the form of a spray, and whereby when the cap is rotated a second predetermined amount the working surface will seal said ports.

2,764,454. Aerosol Apparatus for Decorative Coating and Process for Making Said Apparatus. Patent issued Sept. 25, 1956 to Albert L. Edelstein, New York, N. Y. In an aerosol container spray unit of the portable hand type, the combination including a container, a solid in said container comprising a mixture of different ingredients held together originally as a self-contained cartridge unit when charged into said container, and a liquid propellent in said container having the property of disintegrating said cartridge unit and separating said solids into finely divided sprayable form.

2,761,594. Aerosol Bomb Dispensing Cap. Patent issued Sept. 4, 1956 to William S. Stroh, Queens Village, N. Y., assignor to Scovill Manufacturing Co., Waterbury, Conn., a corporation of Connecticut. A protective dispensing cap for an aerosol bomb of the type which includes an axially projecting dispensing head having a laterally directed discharge opening therein controlled by a depressible valve, said cap comprising an integral, hollow, dome-shaped member formed of relatively firm elastic material having an opening in its lateral wall adapted for registry with the discharge opening in the dispensing head, the top of said dome-shaped member being formed as a central, deformable diaphragm adapted to be depressed to open the valve in the dispensing head, said diaphragm being substantially surrounded by a protective bead extending axially outwardly beyond the diaphragm to permit vertical stacking of aerosol bombs fitted with dispensing caps without depressing the valve of the bomb, said diaphragm having a free edge portion defining the top of the opening in the lateral wall and also having slots therein extending circumferentially inwardly from adjacent the ends of said free edge portion to increase the flexibility of the diaphragm.

2,761,598. Spout Closure. Patent issued Sept. 4, 1956 to Henry S. Darlington, Jr., Media, Pa., assignor to A. H. Wirz, Inc., Chester, Pa., a corporation of Pennsylvania. A closure for a container for liquids comprising a continuous co-molded liquid-

For Maximum Safety in Aerosol Use

make sure that your labeling carries the following five-point caution statement:

1. Contents under pressure
2. Do not puncture
3. Exposure to high temperatures may cause bursting
4. Keep at room temperature — away from direct sunlight, radiators, stoves, hot water and other heat
5. Never throw container into fire or incinerator

Do Your Part To Keep The Aerosol Industry's Safety Record Spotless!

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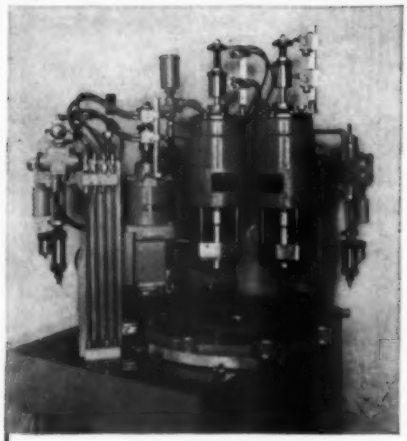

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The New Series 500 Pres-O Valve

• Faster filling • Accurate discharge rate • Approved for all pressurized products, foam and/or spray.

OIL EQUIPMENT Laboratories, Inc.

600 Pearl Street • Elizabeth, New Jersey

FOR AERATING FOOD PRODUCTS

S.S.WHITE

NITROUS OXIDE • CARBON DIOXIDE MIXTURES FOR . . .

WHIPPING CREAM
MAYONNAISE
SALAD DRESSINGS
VEGETABLE OIL TOPPING

THE S. S. WHITE DENTAL MFG. CO.

PROTECTION TO PROCESS . . . BOEHMANN, 2,158,260 DILLER

POLYETHYLENE TUBING FOR AEROSOLS

now available in neatly traversed spools — eliminate Kinks and Snarls!

Available on spools in lengths up to 3000 feet. Prevent costly delays. Will save you time and money. HYDRALENE NO. 35 polyethylene tubing will not split or crack, even with tight friction fits.

Features:

- **Only finest quality virgin material.**
- **Close tolerances.**
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- **Also available in coils or cut pieces.**

This tubing is the result of years of careful development work in the aerosol field.

Write today for free samples and PRICES.

Hydrawlik Company

PIONEER IN PLASTIC TUBING SINCE 1927

131 East First Ave. Roselle, New Jersey

impermeable flexible polyethylene structure having in the center thereof a spout having walls forming a long upwardly tapering tube, the outer surface of said spout contracting near the top of said tube to form a projection, thin walled at that point and at a higher point extending completely across the top of the tube to close it off, the maximum diameter of the projection being smaller than the minimum diameter of the rest of the spout, a base integral with and extending outwardly of the spout and then downward in a flange having an interior rib to form a snap-on cover over a liquid receptacle, and a neck-like extension integral with and extending outward from a point on the flange, and a tapering cap having an interior of a size corresponding to the top of the tube, said cap being integral with the neck and detachable by the breaking thereof.

2,763,406. VALVE CONSTRUCTION FOR DISPENSING CONTAINERS. Patent issued Sept. 18, 1956 to James H. Countryman, Dayton, Ohio. A valve for a dispensing container having body and top portion sealed together, said valve comprising a pair of sheet metal members secured at their edges to the body portion, said members being spaced apart at the center to form a chamber, a washer contained within and supported on the bottom of said chamber, an opening in the washer, a hollow tube, open at the top and closed at the bottom, said tube having a press fit in said opening and being free to move in angular directions, apertures in the periphery of said tube at the position of said washer, a collar on the tube and resting on top of the washer within the chamber, said washer being distortionable by said collar along the opening in the washer to provide a space between the washer and dispensing tube when manual pressure is applied to the tube in an angular direction so as to bring the interior of the container into communication with said space and the peripheral openings in the tube.

Trade Mark Applications

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. Notice of opposition to registration of any trademark must be filed within 30 days of publication of the application in the *Gazette*, and must be accompanied by a fee of $25.

SNO-WITE, in block capitals for spray-type cleaning and restoring compound for white side wall automobile tires. Filed Aug. 23, 1955 by Windsor Lloyd Products, Inc., Wilmington, Del. Claims first use July 22, 1955.

SHERBROOKE, in capitals, for after-shave after-shower skin toner dispensed in mist form. Filed Oct. 31, 1955 by Lee Nusbaum, d.b.a. Sherbrooke Co., Philadelphia, Pa. to Pennco Engineering Co., Philadelphia. Claims first use Oct. 19, 1955.

SH-BOOM, in heavy black capitals, for insecticides packaged in pressurized containers. Filed June 20, 1955 by Demert & Dougherty, Inc., Chicago, Ill. Claims first use on or about May 10, 1955.

Professional Directory

Lancaster,
Allwine
&
Rommel

Registered Patent Attorneys

Suite 428,
815 — 15th STREET, N. W.,
Washington 5, D. C.

Patent Practice before
U.S. Patent Office

Validity and Infringement
Investigations and Opinions

Booklet and form
"Evidence of Conception"
forwarded upon request.

bio-assay
INSECTICIDE AEROSOL

- *formulation performance*
- *label claims*
- *mammalian toxicity*

WISCONSIN ALUMNI RESEARCH FOUNDATION
INSECTICIDE TESTING LABORATORY
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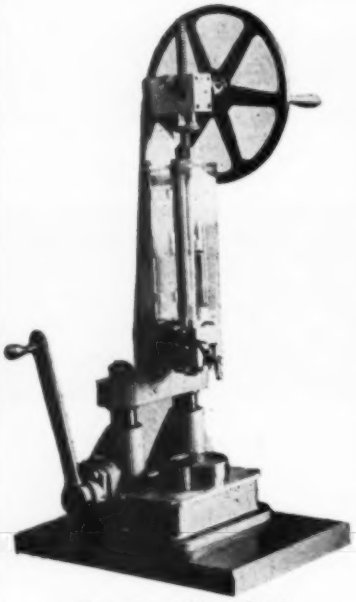
Our apparatus division has been set up to make all items available to the industry. Prices and descriptive literature on request.



Foresman Liquefied Gas Manipulator

APPARATUS AVAILABLE

Liquefied Gas Manipulator w/Universal Head
Propellant Manifold for Manipulator
Hand Operated Vial Capper
Change Parts for Vial Capper
One inch opening Can Closing Press
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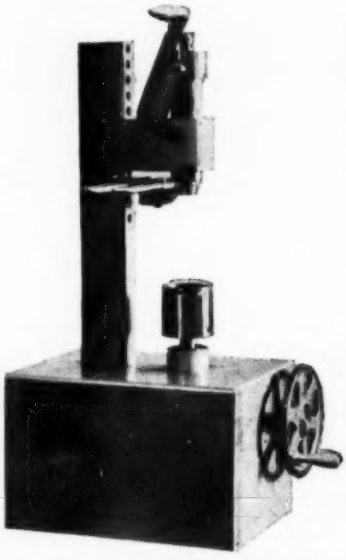
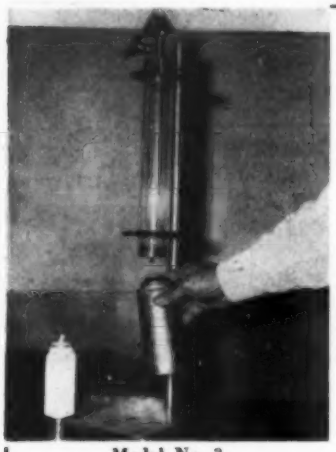
Karl Fischer Pressure Titration Cells
Dead Stop Indicator for Karl Fischer Titrameter
Density Units
High Pressure Test Bombs
Can Sampling Units — Piercing or Valve Actuating
Pressure Gauging Unit — Pressure Balance or Water Filled
Flammability Set
Test Ovens — Standard or Custom Built
Instantaneous Chiller Units — Mechanically Refrigerated
Electric Hot Water Test Bath Standard or Custom Built
Hot Water Bath Transfer Baskets Safety Top
Tank Racks
Table Tank Rack Combinations
Safety Screen Tubes for Glass Pressure Tubes
Plastic Protective Screens
Gloves
Masks

Apparatus Division
ROBERT A. FORESMAN, JR.
1690 Margaret Street
Philadelphia 24, Pa.



Foresman Hand Operated Vial Capper



Model No. 3

LABORATORY AEROSOL PRESSURE FILLER

as illustrated
$120.00

For metering liquids under pressure into Aerosol containers. Safety feature is burette encased in heavy Lucite tube. Available with 30 ML or 100 ML burettes.

other items:
Constant temperature water baths
Stainless ovens, tables, lab cabinets, containers
Pressure testers for Aerosol containers
Snap-on Screw top for Aerosol containers

BUILDERS SHEET METAL WORKS INC.

108 Wooster St. New York 12, N. Y.

Is business good?

We hope so, and we hope it continues that way in 1957; *but no matter how well you're doing, you can't afford to lose track of what's going on in this fast-changing industry. You can stay abreast of new products, new methods and new materials for your industry by reading AEROSOL AGE every month. You can subscribe by sending* $2 *to us at BOX* 31, *CALDWELL, N. J. You'll get the next* 12 *issues.*

CLASSIFIED ADVERTISING

Rates for classified advertisements are ten cents per word, $2.00 minimum, except those of individuals seeking employment which *Aerosol Age* will run without charge. Check must accompany all classified advertisements. Address all replies to Classified Advertisements with Box Number, care of *Aerosol Age*, Box 31, Caldwell, N. J. Closing date: tenth of month preceding month of issue.

Manufacturers Agents Wanted — New Aerosol paint products manufacturer located in the Midwest plans nationwide coverage and is seeking men in all territories who call on paint, hardware, florist, mill supply houses, etc. New line has tremendous possibilities. Give details or territory covered. All replies confidential. Address Box 110, c/o AEROSOL AGE.

Aerosol Executive seeks position offering responsibility and opportunity for promising future to a man who has wide experience in the field. Address Box 107, c/o AEROSOL AGE.

Wanted — Can use 750 dozen aerosols, insecticide, mothicide, deodorizers, etc. Do you have any end-runs, close-outs, or over-stock? Address Box 108, c/o AEROSOL AGE.

U. S. Representative Wanted: Largest manufacturer of aerosol equipment in Europe seeks representation in the United States. Complete line includes filling machines, valve clinching machines, electrically heated test bath, dust and particle remover, laboratory testing cabinet, compressors, etc. Correspondence is invited from firms with facilities and acquaintance with the aerosol industry in the United States which would fit them to act as exclusive U. S. distributors for this complete and well-known line of aerosol equipment. Address Box 101, c/o AEROSOL AGE.

Foreman — Supervise and maintain new aerosol line with general knowledge of other packaging. Philadelphia area. Salary open. Reply in confidence. Address Box 109, c/o AEROSOL AGE.

Situation Wanted: Aerosol chemist and formulator . . . long outstanding experience in research, development and production in this and allied fields, —chemical specialties, cosmetics, household and industrial formulations. Seeks responsible position with reliable concern, or party interested in aerosols. Box 111, c/o AEROSOL AGE.

Equipment Wanted: If you are modernizing your aerosol filling setup, we are interested in buying your existing installation, if it is in reliable functioning condition. Medium capacity (for overseas). Give full details. Box 112, c/o AEROSOL AGE.

•

Niles To New Fritzsche Post

M. J. Niles, manager of the Chicago office of Fritzsche Brothers, Inc., New York, has been named to the newly-created post of special representative for the president. In his new post he will "undertake key assignments directly related to sales."

Mr. Niles has been with the company for 25 years, serving for the past eight years as manager of the Chicago branch. His new offices will be at the company's New York headquarters in the Port Authority Building.

Keep Up

with the Aerosol Field!

...by subscribing to *AEROSOL AGE*

(only $2.00 for 12 issues)
In U.S.A. only

- In a rapidly expanding market like the aerosol field, only a magazine devoted specifically and exclusively to aerosols can keep you up to date on latest developments.
- This sample copy will give you an idea of the type feature articles by industry authorities — and complete news coverage — which AEROSOL AGE will bring you every month.
- Why not send in your subscription card right now to make sure that you get every issue of AEROSOL AGE — a magazine that's indispensable to your business.

• *Use the handy postpaid subscription card on page* 49.

AEROSOL PUBLICATIONS **CALDWELL, NEW JERSEY**

THE MAGAZINE OF PRESSURE PACKAGING

Your Advertisement Here . . .

will carry your sales message to potential buyers throughout the entire aerosol field. If you supply materials, equipment or services to any section of this rapidly expanding market, AEROSOL AGE is your logical first selection as an advertising medium, because:

- *it gives complete coverage of the entire aerosol market*
- *no waste circulation*
- *minimum rate*
- *it is the only publication edited specifically and exclusively for the aerosol field*

Circulation — 4500

Advertising rates on request

AEROSOL AGE

(Affiliated with Industry Publications, Publishers of *Agricultural Chemicals and Modern Lithography*)

P. O. Box 31
Caldwell, N. J.

***N. Y. Phone:* BArclay 7-7121**

***New Jersey Phone:* CAldwell 6-5520**

Consultant's Corner

(*From Page* 35)

charged with line cleanout and changeover preparations, with unfortunate results.

Occasionally, by reason of complete ignorance of either what is required or the importance of supplying what is specified, a worker will intentionally mix material in order to save trouble or time. Investigation of this condition, on at least one occasion, has revealed the truth that "a little knowledge is a dangerous thing." An operator may have seen a supervisor put a new material into a line with very perfunctory cleaning of the old. What he does not know is that both materials are essentially the same, and any difference between the two will be practically imperceptible for the few cans involved, until the fresh material is flowing pure.

The two products mixed by the supervisor happened to be insecticides. However, when the operator himself mixes two materials, the fresh one is an air deodorant, while the old one had been a rather unpleasant smelling insecticide. Three lessons can be learned from this episode —

1. Preferably only supervisors should change concentrates.
2. Even supervisors should clean out a line thoroughly when changing concentrates.
3. Any operator given the responsibility of changing concentrate should be thoroughly trained in all details of the job and supervised carefully until it is certain he knows what can be done and what cannot be done.

One of the most important details in training personnel is to teach them how to identify the various mechanical components of aerosol packages, as well as the materials that make up the container ingredients. After these things are learned, it will be found that work sheets or job orders or pack specifications or whatever the production working instructions are called, will take on new significance

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for all concerned. It will be an unusual plant where as a result of new knowledge, at least questions concerning the makeup of the package will not result as production goes on. It is entirely possible that serious mistakes may be avoided because of increased worker interest and ability.

Quantities of ingredients and quality of closing operations, temperature of water baths, temperatures of cold fill units, liquid level controls, line pressures in liquid and air systems, the possibility of loss of low boiling fractions due to cold fill line stoppage, and any number of other points of possible trouble or error should all be explained and their importance emphasized to each person on a line, even though the responsibility for error-free operation must of necessity rest with the supervisors.

It will be found that not only will quality be better safeguarded through thorough education of each worker, but the work force will be more flexible and quite frequently, due to higher morale, production per worker will rise. Regardless of the degree of competence of your work force, it will be well worth while to review all production phases of your operation with them from time to time.★

Aerosols Overseas

(*From Page* 34)

samples which looked good after being subjected to high HCl-percentage solutions (8 to 10 per cent) and at elevated temperatures. If successful, use of this inhibitor might mean the elimination of internal lacquers, not only in aerosol cans but also in aluminum tubes and containers for other products. The inhibitor is said to have other applications in the aluminum product field, and aluminum sheets may probably be safely pickled in HCl without damage. The result appears to be an interesting surface etching effect, desirable in itself. Foreign deposits are also said to be removable with the inhibitor in HCl solutions from aluminum vessels, tubes and other containers, including calcium deposits from the bottom of aluminum kitchen tea-kettles. We will follow these tests closely, reporting results and conclusions.★

Who's Who

From Page 37)

ing contacts with European loaders and formulators that year. In the spring of 1955 the company issued its European Aerosol Survey on a gratis basis, putting it on a subscription basis at the end of the year. That same year the company had licensees working on valves in Italy and Germany, and this year concluded an arrangement in the United Kingdom.

Druk-Pak's line of Swiss-made aerosol laboratory equipment has met with considerable success, and its Germany-manufactured pressure filling machines for commercial production have just recently been put on the European Market. Dr. Clark attributes success of his company to the excellent chemists and machinists in Europe, plus the help from propellant manufacturers in both Europe and the U. S.

OVER THE TRANSOM

THE importance of test marketing prospective new aerosol products cannot be overemphasized. Things do go wrong, and it's obviously much better to have them go wrong at the test-marketing stage, rather than after a big commercial batch has been manufactured and shipped out to retailers. Bugs in the product at this stage can cause real trouble and perhaps give the product a black eye before it has ever had a chance to prove itself. And when a product gets a black eye, the whole aerosol industry gets one too.

* * *

We heard of a couple cases recently where wrong can design hampered sales of products which might have figured to go much better than they did. In one example of poor planning it was discovered too late that the containers wouldn't stack, —which of course meant no displays in the super-markets, or anywhere else for that matter. Another poorly selected container involved faulty can design, with the seams inadequate to hold the pressures which were found to build up on shelf storage.

* * *

Calling all custom fillers of aerosols in Mexico! We have had three inquiries within the past few weeks for a Mexican custom filler. While we have a number of copies of *Aerosol Age* going to Mexico, we aren't sure that there is a custom filler among the list. If there is such an operator in our neighbor country to the south, let him identify himself. Maybe we can send him a worth-while customer or two.

* * *

As we get the story, it's to be "ent" for Pennsalt. We asked Wiley Pickett, who is to be in charge of "Isotron" sales for Pennsalt, how they would spell the industry's key word, and he has given us the following reply, and note of explanation:

You have asked which way Pennsalt intends to spell "propellent." Therein here's an interesting tale.

Back in March this year, I observed that our first aerosol advertisement in *Fortune* and *Business Week* was spelled with an "a". On checking, I found that most of the trade journals and allied trade literature also spelled it "propellant." However, all the DuPont literature showed "propellent."

On checking the dictionary, I found that all dictionaries show "propellant" as a noun and "propellent" as the adjective. The more recent, and presumably the more enlightened dictionaries, show a secondary meaning for "propellent" as "Something which propels." On the other hand, "Propellant" was defined in Webster's Unabridged 1953 as "A propelling agent; specif.: (a) an explosive for propelling projectiles, (b) fuel plus oxidizing agent used by a rocket engine."

Accordingly, we have decided that the word "propellant" more properly connotes jet propulsion and rocket propulsion, while "propellent" is a milder and, hence, more apt description of the fluorinated hydrocarbons.

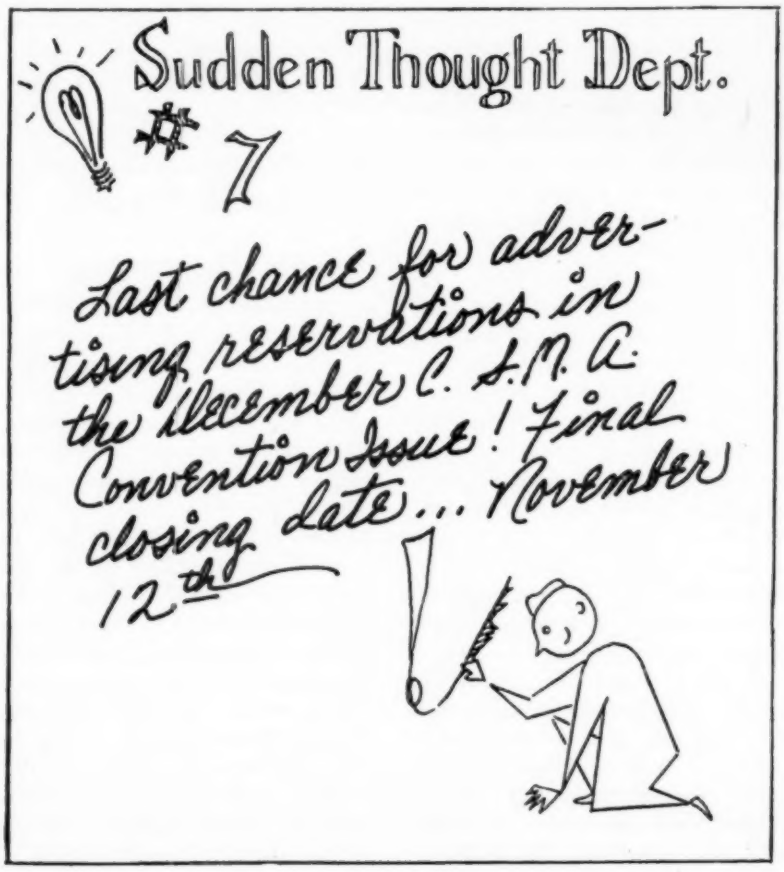
P. S. You are to be congratulated on the fine public relations job your publication is doing for the aerosol industry. It serves the very useful purpose of stimulating new interest in new products and of focusing the attention of packaging engineers and management on aerosol products.

Thanks for them kind words, Wiley. And as for the question propell"ent" or propell"ant", we for the moment at least are committed to the "ant" form. However, the minute the trade can move toward a uniform spelling, one way or the other, we will go right along quietly.

The Publisher.

* * *

Our list of subscribers to Aerosol Age overseas continues to grow. Aerosol packagers and marketers round the world are apparently avid for any and all useful information on aerosol topics. They are not so fortunate as pressure packagers in the States who have dozens of nearby sources to turn to for the latest up-to-the-minute information on containers, propellants, valves, etc.


Sudden Thought Dept.
#7
Last chance for advertising reservations in the December C. S. M. A. Convention Issue! Final closing date... November 12th

Walter Winchell accepts gift of $25,000 from Ralph G. Martin, president of Real-Kill, Inc.

Offers $25,000 for a bug—No Takers!

Despite nation-wide publicity, no one was able to claim $25,000 reward offered by "Real-Kill" for an insect that could not be killed by their new spray.

They have awarded the purse to Walter Winchell for the Damon Runyon Cancer Fund.

No contest was needed however to prove "Real-Kill" is highly effective. It is extra-potent because of Penick's synergist:

SULFOXIDE

Sulfoxide is available in a form suitable for your formulations, too. It will save you money and make your pesticides more effective. We'll be glad to send technical data, price and delivery information.

PENICK

Agricultural Chemical and Insecticide Division

S. B. PENICK & COMPANY 50 CHURCH ST., NEW YORK 8 · 735 W. DIVISION ST., CHICAGO 10

Vital Part Of Another, Water-Base Aerosol Packaging Success

VALVE BY RISDON

The new push-button bonanza for housewives—Jet-Spray BON AMI is one of the latest pressurized products dispensed by a Risdon 5210 valve.

This is a water-base product which cannot be mixed with the propellant; therefore a three-phase dispensing system is used. This system calls for a 5210 valve equipped with a Risdon "Micro-Mist"* actuator which produces a fine, atomized spray by a mechanical shearing effect. For conventional aerosols (2-phase) the valve is supplied either with standard Risdon actuators or with "Micro-Mist" actuators when a finer, drier, wider-cone spray is desired.

The 5210 valve has proven an ideal control for virtually the entire range of aerosols. It uses no spring and is made entirely of nylon and rubber except for the metal mounting cup. It is suitable for vertical or horizontal sprays or for foam dispensing. This same basic valve is also available adapted for glass or plastic containers.

*Patented

• • • • • • • • • • • • • • • • •

RISDON VALVES FOR:

Pressurized Products Packaged in Glass, Metal or Plastic Containers.

DISPENSING:

Conventional Aerosols, 3-Phase Products, Alcohol Base Products, Water-Base Products, Foam Products, Powder Sprays, Metered Sprays, Ultra-Low Pressure Applications, Products Containing Propellant Emulsions or Dispersions, etc.

SEND FOR THESE FREE BOOKLETS

Both the 5210 valve and its glass container counterpart, the GB valve, are described and illustrated in detail by these bulletins. The "Micro-Mist" and other actuators are also covered. Ask for 5210 and GB valve bulletins.

RI-82

RISDON

THE RISDON MANUFACTURING COMPANY
Valve Division, Naugatuck, Conn.